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Public Health Effects from Industrial Amines Production, A Preliminary Evaluative Approach Volume 2: Appendices

PEDCo-Environmental, Inc.
Cincinnati, OH

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16. ABSTRACT

The volume gives five appendices in support of a report giving results of a study to assess the degree to which available data on health effects of chemical exposure, data from the National Cancer Institute, and information on production and use of classes of chemicals suspected of being carcinogenic might be used to identify possible cancer-related operations needing field investigation. The appendices are: (a) a master list of commercially significant industrial amine chemicals; (b) a summary of amines production; (c) an epidemiological analysis for point sources; (d) facility and county data for 14 counties included in the epidemiological analysis; and (e) cancer mortality rates for selected counties versus their contiguous counties. Volume 1 summarizes results of the study.

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Amines	Stationary Sources	07C
Nitroso Compounds	Nitrosamines	
Industrial Processes	Health Effects	13H
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VOLUME 2

APPENDICES

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APPENDIX A

MASTER LIST OF COMMERCIALLY SIGNIFICANT INDUSTRIAL AMINE CHEMICALS

INDUSTRY CATEGORY *ACIDS, FATTY & HIGHER SYNTHETICS*

THIS INDUSTRY CATEGORY CONTAINS NO AMINO COMPOUNDS PER THE ESTABLISHED DEFINITION.

INDUSTRY CATEGORY *ALCOHOLS, FATTY & HIGHER SYNTHETICS*

THIS INDUSTRY CATEGORY CONTAINS NO AMINO COMPOUNDS PER THE ESTABLISHED DEFINITION.

INDUSTRY CATEGORY *CHELATING AGENTS*

PRIMARY AMINES
------- ------

NONE

SECONDARY AMINES
--------- ------

NONE

TERTIARY AMINES
-------- ------

DIETHANOLGLYCINE,SODIUM SALT

DIETHYLENETRIAMINEPENTAACETIC ACID,PENTASODIUM SALT

ETHANOLDIGLYCINE,DISODIUM SALT

ETHYLENEDIAMINETETRAACETIC ACID

ETHYLENEDIAMINETETRAACETIC ACID,DISODIUM,DIAMMONIUM,UNSPECIFIED SALTS,TRISODIUM,TRIAMMONIUM,
TRIPOTASSIUM,TETRAAMMONIUM,TETRASODIUM,AND SODIUM SALTS

N-HYDROXYETHYLETHYLENEDIAMINETRIACETIC ACID AND TRISODIUM SALT

NITRILOTRIACETIC ACID AND TRISODIUM SALTS

NITRILOTRIACETIC ACID,DISODIUM SALT,MONOHYDRATE

INDUSTRY CATEGORY *CRUDE PRODUCTS FROM PETROLEUM AND NATURAL GAS*

THIS INDUSTRY CATEGORY CONTAINS NO AMINO COMPOUNDS PER THE ESTABLISHED DEFINITION.

INDUSTRY CATEGORY *CYCLIC INTERMEDIATES*

PRIMARY AMINES

3-AMINO-A-ETHYLHYDROCINNAMIC ACID

4-AMINO-M-TOLUENESULFONIC ACID

6-AMINO-M-TOLUENESULFONIC ACID

5-AMINO-O-TOLUENESULFONIC ACID

7-((4-AMINO-O-TOLYL)AZO)-1,3-NAPHTHALENEDISULFONIC ACID

3-AMINO-P-ANISANILIDE

2-AMINO-P-BENZENEDISULFONIC ACID

2-AMINO-P-CRESOL

3-AMINO-P-TOLUAMIDE

4-AMINO-P-TOLUENESULFONAMIDE

N-(4-AMINO-1-ANTHRAQUINONYL) ANTHRANILIC ACID

N-(5-AMINO-1-ANTHRAQUINONYL) ANTHRANILIC ACID

2-AMINO-1-CHLOROANTHRAQUINONE

5-AMINO-1-NAPHTHALENESULFONIC ACID

4-AMINO-1-NAPHTHALENESULFONIC ACID

2-AMINO-1-NAPHTHALENESULFONIC ACID

6-AMINO-1,3-NAPHTHALENEDISULFONIC ACID

7-AMINO-1,3-NAPHTHALENEDISULFONIC ACID

8-AMINO-1,3,6-NAPHTHALENETRISULFONIC ACID

7-AMINO-1,3,6-NAPHTHALENETRISULFONIC ACID

5-AMINO-1,4-DICHLOROANTHRAQUINONE

3-AMINO-1,5-NAPHTHALENEDISULFONIC ACID

2-AMINO-1,5-NAPHTHALENEDISULFONIC ACID

4-AMINO-1,6-NAPHTHALENEDISULFONIC ACID

5-AMINO-2-(P-AMINOANILINO)BENZENESULFONIC ACID

1-AMINO-2-BROMO-4-HYDROXYANTHRAQUINONE

1-AMINO-2-BROMO-4-P-TOLUIDINOANTHRAQUINONE

1-AMINO-2-CHLORO-4-HYDROXYANTHRAQUINONE

3-AMINO-2-MERCAPTOBENZOIC ACID

1-AMINO-2-NAPHTHALENESULFONIC ACID

6-AMINO-2-NAPHTHALENESULFONIC ACID

8-AMINO-2-NAPHTHOL

3-AMINO-2-OXAZOLIDINONE

1-AMINO-2,4-DIBROMOANTHRAQUINONE

1-AMINO-2,4-DICHLOROANTHRAQUINONE

5-AMINO-2,4-XYLENESULFONIC ACID

4-(4'-AMINO-2''-METHYLPHENYLAZO)-7-PHENYLAZONAPHTHALENE-1,3-DISULFONIC ACID,DISODIUM SALT

N-(4-AMINO-3-BROMO-1-ANTHRAQUINONYL)-P-TOLUIDINE SULFONIC ACID

4-AMINO-3-HYDROXY-1-NAPHTHALENESULFONIC ACID

N-(4-AMINO-3-METHOXY-1-ANTHRAQUINONYL)-P-TOLUENESULFONAMIDE

M-((4-AMINO-3-METHOXYPHENYL)AZO) BENZENESULFONIC ACID

M-(4-AMINO-3-TOLYLAZO)BENZENESULFONIC ACID

6-AMINO-3,4'-AZODIBENZENESULFONIC ACID

2-AMINO-4-(METHYLSULFONYL) PHENOL

1-AMINO-4-(3-AMINO-4-SULFOANILINO-9,10-DIHYDRO-9,10-DIOXO-2-ANTHRACENESULFONIC ACID)

1-AMINO-4-(4-AMINO-3-SULFOANILINO-9,10-DIHYDRO-9,10-DIOXO-2-ANTHRACENESULFONIC ACID)

1-AMINO-4-ANILINO-2-METHOXYANTHRAQUINONE

1-AMINO-4-BENZAMIDOANTHRAQUINONE

1-AMINO-4-BROMO-9,10-DIHYDRO-9,10-DIOXO-2-ANTHRACENE-SULFONIC ACID AND SODIUM SALT

6-AMINO-4-CHLORO-M-TOLUENESULFONIC ACID

O-(3-AMINO-4-CHLOROBENZOYL) BENZOIC ACID

2-AMINO-4-CHLOROPHENOL

7-AMINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACID

6-AMINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACID

2-AMINO-4-NITROACETANILIDE

5-AMINO-4,5'-DIHYDROXY-3,4'-((2-METHOXY-5-METHYL-P-PHENYLENE)BIS(AZO))-DI-2,7-NAPHTHALENEDI-
SULFONIC ACID,5'-BENZENESULFONATE

2-AMINO-4,6-DICHLORO-5-CRESOL

4-AMINO-4'-(3-METHYL-5-OXO-2-PYRAZOLIN-1-YL)-2,2'-STILBENEDISULFONIC ACID

4-AMINO-4'-NITRO-2,2'-STILBENEDISULFONIC ACID

8-AMINO-5-(PHENYLAZO)-2-NAPHTHOL

1-AMINO-5-BENZAMIDOANTHRAQUINONE

2-AMINO-5-BROMO-5-NITROBENZONITRILE

2-AMINO-5-CHLORO-P-TOLUENESULFONIC ACID

3-AMINO-5-CHLORO-2-HYDROXYBENZENESULFONIC ACID

2-AMINO-5-CHLORO-4-ETHYLBENZENESULFONIC ACID

1-AMINO-5-CHLOROANTHRAQUINONE

4-AMINO-5-HYDROXY-2,7-NAPHTHALENEDISULFONIC ACID,BENZENESULFONATE

4-AMINO-5-HYDROXY-2,7-NAPHTHALENEDISULFONIC ACID,MONOSODIUM SALT

2(2-AMINO-5-HYDROXY-7-SULFO-1-NAPHTHYLAZO)-5-NITRO-BENZOIC ACID

7-((4 AMINO-5-METHOXY-O-TOLYL)AZO)-1,3-NAPHTHALENEDISULFONIC ACID

4-((4-AMINO-5-METHOXY-O-TOLYL)AZO)-5-HYDROXY-2,7-NAPHTHALENEDISULFONIC ACID,BENZENESULFONATE

2-AMINO-5-NITROBENZENESULFONIC ACID

2-AMINO-5-NITROTHIAZOLE

2-AMINO-5,6-DICHLOROBENZOTHIAZOLE

4-AMINO-6-CHLORO-M-BENZENEDISULFONAMIDE

2-AMINO-6-CHLOROPYRAZINE

3-AMINO-6-CHLOROPYRIDAZINE

5-AMINO-6-METHOXY-2-NAPHTHALENESULFONIC ACID

2-AMINO-6-NITROBENZOTHIAZOLE

3-AMINO-9-ETHYLCARBAZOLE

1-AMINO-9,10-DIHYDRO-9,10-DIOXO-4-P-TOLUENESULFONICAMIDO-2-ANTHROCENESULFONIC ACID, SODIUM
SALT

3'-AMINOACETANILIDE

4'-AMINOACETANILIDE

3'-AMINOACETOPHENONE

2'-AMINOACETOPHENONE

2-(P-AMINOANILINO)-5-NITROBENZENESULFONIC ACID

1-AMINOANTHRAQUINONE A-SALT

2-AMINOANTHRAQUINONE A-SALT

4-AMINOANTIPYRINE A-HYDROCHLORIDE

P-AMINOBENZAMIDE

7-(P-AMINOBENZAMIDO)-4-HYDROXY-2-NAPHTHALENESULFONIC ACID

7-(M-AMINOBENZAMIDO)-4-HYDROXY-2-NAPHTHALENESULFONIC ACID

3'-AMINOBENZANILIDE

4-AMINOBENZOPHENONE

2-(M-AMINOBENZOYL)-O-ACETANISIDIDE

7-AMINOCEPHALOSPORANIC ACID

N-AMINOETHYLPIPERAZINE

6-AMINOPENICILLANIC ACID

O-AMINOPHENOL

1-(M-AMINOPHENYL)-5-OXO-2-PYRAZOLINE-3-CARBOXYLIC ACID

2-(P-AMINOPHENYL)-6-METHYL-7-BENZOTHIAZOLE SULFONIC ACID AND SALT

2-(P-AMINOPHENYL)-6-METHYLBENZOTHIAZOLE

7-((4-AMINOPHENYL)AZO)-1,3-NAPHTHALENEDISULFONIC ACID

P-((P-AMINOPHENYL)AZO)BENZENESULFONIC ACID

M-((P-AMINOPHENYL)AZO)BENZENSULFONIC ACID

5-((P-AMINOPHENYL)AZO)SALICYLIC ACID

2,2'-(M-AMINOPHENYLIMINO)DIETHANOL,DIACETATE ESTER

4'-AMINOPROPIOPHENONE

3-(AMINOPROPYL)CYCLOHEXYLAMINE

5-AMINOSALICYLIC ACID

1,5(AND 1,8)-DIAMINOANTHRAQUINONE

5(AND 8)-AMINO-1-ANTHRAQUINONESULFONIC ACID

5(AND 8)-AMINO-8(AND 5)-BROMO-9,10-DIHYDRO-9,10-DIOXO-1,6(AND 1,7) ANTHRACENEDISULFONIC ACID

2'-ANILINO-6-DIETHYLAMINO-3-METHYLFLUORAN

ANTHRANILIC ACID

ANTHRANILIC ACID,METHYL ESTER

BENZIDINE BASE

4,4'-BENZYLIDENE DI-O-TOLIUDINE

BIS(2-AMINOPHENYL)DISULFIDE

BIS-P-AMINOCYCLOHEXYLMETHANE

2-BROMO-4,6-DINITROANILINE

2-BROMO-6-CHLORO-4-NITROANILINE

P-BROMOANILINE

P-BUTYLANILINE

4-CHLORO-O-PHENYLENEDIAMINE

3-CHLORO-O-TOLUIDINE

5-CHLORO-O-TOLUIDINE

3-CHLORO-P-TOLUIDINE

4-CHLORO-2-NITROANILINE

5-CHLORO-2,4-DIMETHOXYANILINE

5-CHLORO-2,4-DISULFAMYLANILINE

4-CHLORO-2,5-DIMETHOXYANILINE

2-CHLORO-4-NITROANILINE

4-CHLOROMETANILIC ACID

6-CHLOROMETANILIC ACID

B-(1-CYCLOHEXENYL)ETHYLAMINE

4,4'-DIAMINO-2,2-BIPHENYLDISULFONIC ACID

4,4'-DIAMINO-2,2-STILBENEDISULFONIC ACID

1,4-DIAMINO-2,3-DICHLOROANTHRAQUINONE

1,4-DIAMINO-2,3-DIHYDROANTHRAQUINONE

3,5-DIAMINO-2,4,6-TRIIODOBENZOIC ACID

1,5-DIAMINO-4,8-DIHYDROXYANTHRAQUINONE

4,8-DIAMINO-9,10-DIHYDRO-1,5-DIHYDROXY-9,10-DIOXO-2,6-ANTHRACENEDISULFONIC ACID

1,4-DIAMINO-9,10-DIHYDRO-9,10-DIOXO-2,3-ANTHRACENEDICARBOXIMIDE

1,5-DIAMINOANTHRAQUINONE

1,4-DIAMINOANTHRAQUINONE

2,6-DIAMINOANTHRAQUINONE

2,5-DIAMINOBENZENESULFONIC ACID

2,4-DIAMINOBENZENESULFONIC ACID

DIANISIDINE DIISOCYANATE

2,6-DIBROMO-4-NITROANILINE

2,6-DICHLORO-4-NITROANILINE

2,5-DIMETHOXY-A-METHYLPHENETHYLAMINE

2,5-DIMETHOXYANILINE

2,4-DIMETHOXYANILINE

3,3'-DIMETHOXYBENZIDINE

3,4-DIMETHOXYPHENETHYLAMINE

N,N-DIMETHYL-P-PHENYLENEDIAMINE

N,N-DIMETHYL-P-PHENYLENEDIAMINE MONOHYDROCHLORIDE

2,4-DINITROANILINE

N-ETHYL-N-(B-AMINOETHYL)-M-TOLUIDINE

FURFURYLAMINE

4-HYDROXY-N'-METHYLMETANILAMIDE

4-HYDROXY-4-ISOPROPYLMETANILAMIDE

2-HYDROXY-5-NITROMETANILIC ACID

4-HYDROXYMETANILAMIDE

4-HYDROXYMETANILANILIDE

4-HYDROXYMETANILIC ACID

1,1'-IMINOBIS(4-AMINOANTHRAQUINONE)

6-METHOXYMETANILIC ACID

5-METHYL-O-ANISIDINE

5-METHYL-4-NITRO-O-ANISIDINE

5,5'-METHYLENEBIS(ANTHRANILIC ACID,DIMETHYL ESTER)

4,4'-METHYLENEBIS(2-CHLOROANILINE)

4,4'-METHYLENEDIANILINE

2-(METHYLSULFONYL)-4-NITROANILINE

1-NAPHTHYLAMINE

4-NITRO-O-ANISIDINE

4-NITRO-O-PHENYLENEDIAMINE

5-NITRO-O-TOLUIDINE

2-NITRO-P-ANISIDINE

2-NITRO-P-TOLUIDINE

4'-NITRO-4-AMINO-3-METHOXYAZOBENZENE

M-NITROANILINE

5-NITROANTHRANILIC ACID

4,4'-OXYDIANILINE

A-PHENETHYLAMINE

PHENETHYLAMINE

N-PHENYL-P-PHENYLENEDIAMINE

4-(PHENYLAZO)-1-NAPHTHYLAMINE

P-PHENYLAZOANILINE

M-PHENYLENEDIAMINE

P-PHENYLENEDIAMINE

O-PHENYLENEDIAMINE

DL-2-PHENYLGLYCINE

D(-)-2-PHENYLGLYCINE

5-SULFAMOYLANTHRANILIC ACID

SULFANILIC ACID

4,4'-SULFONYLDIANILINE

3,3',4,4'-TETRAAMINOBENZOPHENONE

4,4'-THIODIANILINE

TOLUENE-2,4-DIAMINE

4-(O-TOLYLAZO)-O-TOLUIDINE

4-(2,5-XYLAZO)-O-TOLUIDINE

SECONDARY AMINES

8-((2-ACETAMIDO-4-AMINOPHENYL)AZO)-1-5-NAPHTHALENEDISULFONIC ACID

P-AMINO-N-ETHYL-N-1-NAPHTHYLBENZAMIDE

N-(5-AMINO-1-ANTHRAQUINONYL)ANTHRANILIC ACID

N-(4-AMINO-1-ANTHRAQUINONYL)ANTHRANILIC ACID

5'-AMINO-2-(P-AMINOANILINO)BENZENESULFONIC ACID

1-AMINO-2-BROMO-4-P-TOLUIDINOANTHRAQUINONE

N-(4-AMINO-8-BROMO-1-ANTHRAQUINONYL-P-TOLUIDINE SULFONIC ACID

1-AMINO-4-(3-AMINO-4-SULFOANILINO)-9-10-DIHYDRO-9,10-DIOXO-2-ANTHRACENESULFONIC ACID

1-AMINO-4-(4-AMINO-8-SULFOANILINO)-9,10-DIHYDRO-9,10-DIOXO-2-ANTHRACENE SULFONIC ACID

1-AMINO-4-ANILINO-2-METHOXYANTHRAQUINONE

2-(P-AMINOANILINO-5-NITROBENZENESULFONIC ACID

8-ANILINO-1-NAPHTHALENESULFONIC ACID

7-ANILINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACID

ANILINOMETHANESULFONIC ACID A-SALT

M-ANILINOPHENOL

P-ANILINOPHENOL

3-ANILINOPROPIONITRILE

1-P-ANISIDINO-4-HYDROXYANTHRAQUINONE

O-ANISIDINOMETHANESULFONIC ACID

N,N-(1,5-ANTHRAQUINONOLENE) DIANTHRANILIC ACID

6-BENZYLIDENEAMINOPENICILLONIC ACID

1,5-BIS(1-ANTHRAQUINONYLAMINO) ANTHRAQUINONE

1,4-BIS(1-ANTHRAQUINONYLAMINO)ANTHRAQUINONE

1,4-BIS(1-ANTHRAQUINONYLAMINO)ANTHRAQUINONE AND 1,4-BIS(5-CHLORO-1-ANTHRAQUINONYLAMINO) ANTHRAQUINONE(MIXED)

1-BROMO-4(METHYLAMINO)ANTHRAQUINONE

N-BUTYLANILINE

3-(O-CHLOROANILINO) PROPIONITRILE

4,4'-(O-CHLOROBENZYLIDENE)DI-2,5-XYLIDINE

3-CHLORODIPHENYLAMINE

N-CYCLOHEXYLTAURINE,SODIUM SALT

2,5-DIANILINOTEREPHTHALIC ACID

4,5'-DIBENZAMIDO-1,1'-IMINODIANTHRAQUINONE

N,N'-DIBENZYLETHYLENEDIAMINE

3-(2,4-DICHLOROANILINO)-1-(2,4,6-TRICHLOROPHENYL)-2-PYRAZOLIN-5-ONE

P-(2,4-DINITROANILINO) PHENOL

N-ETHYL-M-TOLUIDINE

N-ETHYL-O-TOLUIDINE

N-ETHYL-1-NAPHTHYLAMINE

3-(ETHYLAMINO)-P-CRESOL

3-(ETHYLAMINO)-P-TOLUENESULFONIC ACID

N-ETHYLANILINE

N-ETHYLCYCLOHEXYLAMINE

3'-HYDROXY-2-(METHYLAMINO)ACETOPHENONE

1,1'-IMINOANTHRAQUINONE

1,1'-IMINOBIS (4-BENZAMIDOANTHRAQUINONE)

7,7'-IMINOBIS (4-HYDROXY-2-NAPHTHALENESULFONIC ACID)

1,1'-IMINOBIS (4-NITROANTHRAQUINONE)

1,1'-IMINOBIS (5-BENZAMIDOANTHRAQUINONE)

1,1'-IMINOBIS(4-AMINOANTHRAQUINONE)

N-(P-METHOXYBENZYLIDENE-P-BUTYLANILINE)

N-METHYL-P-NITROANILINE

1-(METHYLAMINO) ANTHRAQUINONE

N-METHYLANTHRANILIC ACID

N-METHYLBENZYLAMINE

N-METHYLCYCLOHEXYLAMINE

P-(2-NAPHTHLAMINO) PHENOL

NITRODIPHENYLAMINE

N-PHENYL-P-PHENYLENEDIAMINE

N-PHENYLANTHRANILIC ACID

4-(PHENYLAZO) DIPHENYLAMINE

N-PHENYLGLYCINE

N-PHENYLGLYCINE,SODIUM AND POTASSIUM SALTS

N-PROPYLANILINE

1,4,5,8-TETRAKIS (1-ANTHRAQUINONYLAMINO) ANTHRAQUINONE

1,4-DI-P-TOLUIDINOANTHRAQUINONE

2-O-TOLUIDINOETHANOL

O-TOLUIDINOMETHANESULFONIC ACID

M-TOLUIDINOMETHANESULFONIC ACID

TERTIARY AMINES

2,2'-((5-ACETAMIDO-2-ETHOXYPHENYL)IMINO) DIETHANOL

2,2'-((3-ACETAMIDO-6-ETHOXYPHENYL)IMINO) DIETHANOL

3-(DI-(2-ACETOXYETHYL)AMINO)-P-ACETOPHENETIDIDE

2-(N-ANILINO) DIETHANOL

2'-ANILINO-6-DIETHYLAMINO-3-METHYLFLUORAN

BENZOIC ACID,3-(N-(2-HYDROXYETHYL)ANILINO) PROPIONITRILE ESTER

N-BENZYL-N-ETHYL-M-TOLUIDINE

4-BIS((P-DIETHYLAMINOPHENYL)METHYL)-2,7-NAPHTHALENEDISULFONIC ACID,LEUCO FORM

4,4'-BIS(DIETHYLAMINO) BENZOPHENONE

4,4'-BIS(DIMETHYLAMINO) BENZHYDROL

4,4'-BIS(DIMETHYLAMINO) BENZOPHENONE

3'-(BIS(2-ACETOXYETHYL)AMINO)-P-ACETOANISIDIDE

3'-(BIS(2-HYDROXYETHYL)AMINO) ACETANILIDE

3'-(BIS(2-HYDROXYETHYL)AMINO) METHANESULFOANILIDE,DIACETATE ESTER

5-(BIS(2-HYDROXYETHYL)AMINO)-2,2'-CHLORO-4-NITROPHENYLAZOBENZANILIDE

2-(N-BUTYLANILINO) PROPIONITRILE

3-(N-BUTYLANILINO) PROPIONITRILE

2-CHLORO-N,N-DIETHYL-4-NITROANILINE

2,2'-((M-CHLOROPHENYL)IMINO) DIETHANOL

2,2'-((M-CHLOROPHENYL)IMINO) DIETHANOL,DIACETATE ESTER

4-((2-CYANOETHYL)ETHYLAMINO)-O-TOLUALDEHYDE

P-((2-CYANOETHYL)METHYLAMINO) BENZALDEHYDE

2-(N,N-DIBENZYL)AMINO-4-ACETAMIDOANISOLE

N,N-DIETHYL-M-ANISIDINE

N,N-DIETHYL-M-PHENETIDINE

N,N-DIETHYL-M-TOLUIDINE

N,N-DIETHYL-P-NITROSOANILINE

N,N-DIETHYL-P-TOLUIDINE

N,N-DIETHYL-4-NITROSO-M-PHENETIDINE

P-(DIETHYLAMINO) BENZALDEHYDE

M-(DIETHYLAMINO) PHENOL

3-(DIETHYLAMINO) PROPIOPHENONE

4-(DIETHYLAMINO)-O-TOLUALDEHYDE

A-(DIETHYLAMINO)-4'-HYDROXY-M-ACETOTOLUIDIDE

3-(2-(DIETHYLAMINO)ETHYL)-4'-HYDROXYACETANILIDE

3-((4'-N,N-DIETHYLAMINO)PHENYLAZO)-1H-1,2,4-TRIAZOLE

7'-DIETHYLAMINO-4-METHYLCOUMARIN

N,N-DIETHYLANILINE

N,N-DIETHYLCYCLOHEXYLAMINE

N,N-((3,3'-DIMETHOXY-4,4'-BIPHENYLENE)BIS(AZO)BIS(N-METHYLTAURINE)

N,N-DIMETHYL-DIBENZ(B,C)OXEPIN-D2(6H)-A-PROPYLAMINE

N,N-DIMETHYL-O-TOLUIDINE

N,N-DIMETHYL-P-NITROSOANILINE

N,N-DIMETHYL-P-PHENYLENEDIAMINE

N,N-DIMETHYL-P-TOLUIDINE

N,N-DIMETHYL-1-NAPHTHYLAMINE

P-(DIMETHYLAMINO)BENZALDEHYDE

M-(DIMETHYLAMINO)BENZOIC ACID

2-((2-(DIMETHYLAMINO)ETHYL)-2-THENYLAMINO)-PYRIDINE

M-(DIMETHYLAMINO)PHENOL

11-(3-(DIMETHYLAMINO)PROPYL)-11-HYDROXY-DIBENZ(B,E) OXEPIN

6-DIMETHYLAMINO-1-METHYLQUINALDINIUM METHYLSULFATE

6-DIMETHYLAMINO-2-(2-(2,5-DIMETHYL-1-PHENYL-3-PYRRYL)-VINYL)-1-METHYL-1-QUINOLINIUM METHYL SULFATE

5-(P-DIMETHYLAMINOBENZYLIDENE)RHODANINE

6-DIMETHYLAMINOQUINALDINE

2-(4'-DIMETHYLAMINOSTYRYL)-3-B-HYDROXYETHYL-5-METHYLTHIADIAZOLIUM CHLORIDE

N,N-DIMETHYLBENZYLAMINE

N,N-DIMETHYLCYCLOHEXYLAMINE

N,N-DIMETHYLSULFANILIC ACID

2-(N-ETHYL-M-TOLUIDINO) ETHANOL

3-(N-ETHYL-M-TOLUIDINO) PROPIONITRILE

A-(N-ETHYL-M-TOLUIDINO)-M-TOLUENESULFONIC ACID

N-ETHYL-N-(B-METHYLSULFONAMIDOETHYL)-M-TOLUIDINE

N-ETHYL-N-(2-CHLOROETHYL) ANILINE

N-ETHYL-N-GLYCEROL-M-TOLUIDINE

2-(N-ETHYL-N-P-CYANOETHYL)-4-ACETAMINOANISOLE

N-ETHYL-N-PHENYLBENZYLAMINE

2-(N-ETHYL-P-((6-METHOXY-2-BENZOTHIAZOYL) AZO) ANILINO) ETHANOL

2-(N-ETHYLANILINO) ETHANOL

3-(N-ETHYLANILINO) PROPIONITRILE

A-(N-ETHYLANILINO)-M-TOLUENESULFONIC ACID

A-(N-ETHYLANILINO)-P-TOLUENESULFONIC ACID

3-(N-(2-HYDROXYETHYL)ANILINO) PROPIONITRILE

2-(N-METHYLANILINO) ETHANOL

3-(N-METHYLANILINO) PROPIONITRILE

N-METHYLDICYCLOHEXYLAMINE

4,4'-METHYLENEBIS(N,N-DIETHYLANILINE)

4,4'-METHYLENEBIS(N,N-DIMETHYLANILINE)

2,2'-((M-NITROPHENYL)IMINO)DIETHANOL

4-NITROSO-N-ETHYL-N-(B-METHYLSULFONAMIDOETHYL)-M-TOLUIDINE

2,2'-((PHENYL)IMINO) DIETHANOL

2,2'-((PHENYL)IMINO) DIETHANOL,DIACETATE ESTER

3,3'-((PHENYL)IMINO) DIPROPIONITRILE

2,2'-(M-TOLYLIMINO) DIETHANOL

2,2'-(O-TOLYLIMINO) DIETHANOL

2,2'-(M-TOLYLIMINO) DIETHANOL,DIACETATE ESTER

N,N,N-TRIBENZYLAMINE

A,A',A''-TRIS(DIMETHYLAMINO) MESITOL

INDUSTRY CATEGORY *ELASTOMERS*

THESE ARE POLYMERIC MATERIALS THAT WHEN CONTAINING NITROGEN, DO NOT FORM AN AMINE LINKAGE. HOWEVER, THEIR PRECURSER/STARTING MATERIALS MAY CONTAIN AMINE LINKAGES.

INDUSTRY CATEGORY *ENZYMES*

ALL ENZYMES COULD BE CONSIDERED AS PRIMARY AMINES SINCE THEY CONTAIN A TERMINAL AMINO GROUP.

INDUSTRY CATEGORY *FIBERS, SYNTHETIC*

(SEE ELASTOMERS CATEGORY)

INDUSTRY CATEGORY *FLAVOR AND PERFUME MATERIALS*

PRIMARY AMINES

ALLYL ANTHRANILATE

CINNAMYL ANTHRANILATE

ETHYL ANTHRANILATE

GLUTAMIC ACID,MONOAMMONIUM SALT

GLUTAMIC ACID,MONOPOTASSIUM SALT

GLUTAMIC ACID,MONOSODIUM SALT

HYDROXYCITRONELLALMETHYL ANTHRANILATE

2-HYDROXYPROPYL P-N,N-BIS(2 HYDROXYPROPYL) AMINO BENZOATE

LINALYL ANTHRANILATE

METHYL ANTHRANILATE

B-NAPHTHYL ANTHRANILATE

PHENETHYL ANTHRANILATE

SECONDARY AMINES

METHYL-N-METHYL ANTHRANILATE

TERTIARY AMINES

NONE

INDUSTRY CATEGORY *MEDICINAL CHEMICALS*

THOSE AMINO COMPOUNDS WHICH FALL UNDER THIS CATEGORY TYPICALLY ARE REGULATED UNDER FOOD AND DRUG LEGISLATIONS AND SHALL NOT BE ADDRESSED IN THIS STUDY. THEY GENERALLY EXHIBIT LOW TOXICOLOGICAL EFFECTS.

INDUSTRY CATEGORY *MISCELLANEOUS CHEMICALS*

PRIMARY AMINES

5-ACETAMIDO-2-AMINOBENZENESULFONIC ACID

3-((2-ACETAMIDO-4-AMINOPHENYL)AZO)-1,5-NAPHTHALENE DISULFONIC ACID

B-ALANINE

ALLYLAMINES

AMINO HEXAMETHYLENEIMINE

B-AMINO-CROTONITRILE

B-AMINO-ETHYLCROTONATE

B-AMINO-METHYLCROTONATE

P-AMINO-N-BENZYL-N-ETHYLBENZENEDIAZONIUM CHLOROSTANNATE

P-AMINO-N-BENZYL-N-ETHYLBENZENEDIAZONIUM CHLOROZINCATE

2-AMINO-N-ETHYL-5-NITROBENZENESULFONAMIDE

4'-AMINO-N-METHYLACETANILIDE

3-(4-AMINO-O-TOLYLAZO)-1,5-NAPHTHALENE DISULFONIC ACID

3'-AMINO-OXANILIC ACID

2-AMINO-1-BUTANOL

4-AMINO-1-NAPHTHALENE DISULFONIC ACID

3-AMINO-1-PROPANOL

2-AMINO-2-(HYDROXYMETHYL)-1,3-PROPANEDIOL

5-AMINO-2-(P-TOLUIDINO)BENZENESULFONIC ACID

2-AMINO-2-ETHYL-1,3-PROPANEDIOL

5-AMINO-2-FLUOROTOLUENE

4-AMINO-2-FLUOROTOLUENE

1-AMINO-2-METHOXY-4(P-TOLUENESULFONAMIDO)ANTHRAQUINONE

2-AMINO-2-METHYL-1-PROPANOL

2-AMINO-2-METHYL-1,3-PROPANEDIOL

1-AMINO-2-PROPANOL

5-AMINO-2,3-DIHYDRO-1,4-PHTHALAZENEDIONE

2-AMINO-2,4,6-TRIIODOBENZOIC ACID ESTERS

B-(4-AMINO-2,5-DIMETHOXYPHENYLSULFONYL) ETHYL SULFATE

3-AMINO-2,7-NAPHTHALENEDISULFONIC ACID

N-(4-AMINO-3-BROMO-1-ANTHRAQUINONYL)-P-TOLUIDINESULFONIC ACID

3-AMINO-4-ETHOXYACETANILIDE

2-AMINO-4-FLUOROTOLUENE

3-AMINO-4-METHOXYBENZAMIDE

3-AMINO-4-METHOXYPHENYL-B-HYDROXYETHYL SULFONE

3-AMINO-4-METHYLBENZAMIDE

2-AMINO-4,6-DIACETAMIDO-5-NITROSOPYRIDINE

3((4-AMINO-5-METHOXY-O-TOLYL)AZO)-1,5-NAPHTHALENEDISULFONIC ACID

8-AMINO-6-METHOXYQUINOLINE

P-AMINOACETOPHENONE

3-(3'-AMINOBENZAMIDO)-1-(2',4',6'-TRICHLOROPHENYL)-5-PYRAZOLONE

P-AMINOBENZOIC ACID,BUTYL ESTER

P-AMINOBENZOIC ACID,ETHYL ESTER

M-AMINOBENZOTRIFLUORIDE

O-AMINOBIPHENYL

E-AMINOCAPROIC ACID

B-AMINOCROTONIC ACID,ETHYL ESTER

B-AMINOCROTONIC ACID,METHYL ESTER

P-AMINODICHLOROCARBOSTYRENE

AMINOETHOXYETHANOL

1-(2-AMINOETHYL)PIPERAZINE

2-AMINOHEPTANE

4-AMINOHIPPURIC ACID

2-AMINOMALONAMIDE

4-AMINOMETHYLPIPERIDINE

4-AMINOPHENYL-B-HYDROXYETHYL SULFONE

3-AMINOPHENYL-B-HYDROXYETHYL SULFONE

7-(4-AMINOPHENYLAZO)-1,3-NAPHTHALENEDISULFONIC ACID

P-AMINOPHENYLMERCAPTOACETIC ACID

2-AMINOPROPYL ALCOHOL

1-(3-AMINOPROPYL)MORPHOLINE

6-AMINOPROPYLTRIETHOXYSILANE

4-AMINOPYRIDINE

3-AMINOPYRIDINE

16-AMINOVIOLANTHRONE

(+)AND(-)-A-(1-NAPHTHYL)ETHYLAMINE

(+)AND(-)-A-METHYLBENZYLAMINE

(+)AND(-)-A-PHENETHYLAMINE AND DERIVATIVES

ANTHRANILAMIDE

D,L-ASPARAGINE

L-ASPARAGINE,MONOHYDRATE

BARIUM CHLORANILATE

3,3',4,4'-BIPHENYLTETRAMINE

1,4-BIS(3-AMINOPROPYL)PIPERAZINE

BIS-HEXAMETHYLENETRIAMINE AMINE

6-BROMO-4,6-DINITROANILINE

O-BROMOANILINE

P-(N-BUTYLAMINO)BENZOIC ACID,ETHYL ESTER

BUTYLENEGLYCOL-BIS B-AMINOCROTONATE

4-CHLORO-O-ANISIDINE

4-CHLORO-O-TOLUIDINE

4-CHLORO-1,3-PHENYLENEDIAMINE

2-CHLORO-1,3-PHENYLENEDIAMINE-5-SULFONIC ACID

4-CHLORO-2-AMINOBENZOTRIFLUORIDE

4-CHLORO-2-NITROANILINE

4-CHLORO-3-AMINOBENZOTRIFLUORIDE

4-CHLORO-3-NITROANILINE

3-CHLORO-4-FLUOROANILINE

2-CHLORO-4-NITROANILINE

2-CHLORO-4,6 DINITROANILINE

2-CHLORO-5-NITROANILINE

P-CHLOROBENZYLAMINE

O-CHLOROBENZYLAMINE

6-CHLOROMETANILIC ACID

CYCLODODECYLAMINE

CYCLOPROPYLAMINE

3,5-DIAMINO-P-TOLUENESULFONIC ACID

4,4-DIAMINO-1,1-BIANTHROQUINONE-3,3'-DISULFONIC ACID,DISODIUM SALT

3,5-DIAMINO-2,4,6-TRIIODOBENZOIC ACID

1,1-DIAMINO-4,4-DIANTHRAQUINONYLIMINE

3,3'-DIAMINOBENZOPHENONE

2,2'-DIAMINOBIBENZYL

1,4-DIAMINOBUTANE

3,7-DIAMINODIBENZOTHIOPHENE DISULFONIC ACID-5,5-DIOXIDE,DISODIUM SALT

2,2'-DIAMINODIPHENYL DISULFIDE

4,4'-DIAMINODIPHENYL DISULFIDE

DIAMINODIPHENYLMETHANE

DIAMINOHEXANITROBIPHENYL

DIAMINOTRINITROBENZENE

2,5 DICHLOROANILINE-4-SULFONIC ACID

3,4-DICHLOROBENZYLAMINE

2,4-DICHLOROBENZYLAMINE

2,5-DICHLOROSULFANILIC ACID

5-DIETHYLAMINO-2-AMINOPENTANE

2,6-DIETHYLANILINE

DIETHYLENETRIAMINE

2,5-DIFLUOROANILINE

2,4-DIFLUOROANILINE

3,4-DIFLUOROANILINE

1,1',1'',1'''((9,10 DIHYDRO-9,10-DIOXO-1,4,5,8-ANTHRACENETETRAYL)TETRAMINO)TETRAANTHRAQUI-
NONE

3,5-DIIODO-L-TYROSINE

DIMETHOXY TRIMETHYL AMINE

2,2-DIMETHOXYETHYLAMINE

1-(3',4'-DIMETHOXYPHENYL)-2-AMINOPROPANE

4,5-DIMETHYL-O-PHENYLENEDIAMINE

1,5-DIMETHYL-2-PHENYL-4-AMINOPYRAZOLONE

DIMETHYLAMINOPROPYLAMINE

1,3-DIMETHYLBUTYLAMINE

2,4-DINITRO-5-FLUOROANILINE

4-ETHOXY-O-PHENYLENEDIAMINE

N-ETHYL-N-HYDROXYETHYL-1,4-PENTANEDIAMINE

4-FLUORO-M-PHENYLENEDIAMINE

P-FLUORO-M-PHENYLENEDIAMINE

4-FLUORO-2-NITROANILINE

4-FLUORO-3-NITROANILINE

2-FLUORO-5-NITROANILINE

M-FLUOROANILINE

P-FLUOROANILINE

O-FLUOROANILINE

M-FLUOROBENZYLAMINE

O-FLUOROBENZYLAMINE

P-FLUOROBENZYLAMINE

GLYCERYL P-AMINOBENZOATE

N-HEPTYLAMINE

N-HEXYLAMINE

4-HYDROXY-N-ISOPROPYLMETANILAMIDE

4-HYDROXY-N'-METHYLMETANILAMIDE

3'-HYDROXY-2-(N-BENZYL-N-METHYLAMINO ACETOPHENONE)

N-(2-HYDROXYPROPYL)ETHYLENEDIAMINE

3,3'-IMINOBISPROPYLAMINE

P-IODOANILINE

5-IODOANTHRANILIC ACID

ISOBUTYL-P-AMINOBENZOATE

ISOBUTYLAMINE

ISOPENTYLAMINE

LEUCO-1,4-DIAMINOANTHRAQUINONE

3-METHOXYETHOXYPROPYLAMINE

3-METHOXYPROPYLAMINE

METHYL-P-AMINOBENZOATE

3-METHYL-1-(2,5-DICHLOROSULFANILIC)-5-PYRAZOLONE

5-METHYL-2-AMINOHEXANE

2-METHYL-5-NITROANILINE

DL-A-METHYLBENZYLAMINE

P-METHYLBENZYLAMINE

2-(METHYLSULFONYL)-4-NITROANILINE

5-NITRO-O-ANISIDINE

4-NITRO-O-TOLUIDINE

M-NITRO-P-PHENYLENEDIAMINE

4-NITRO-1,2-PHENYLENEDIAMINE

3-NITRO-4-CHLOROANILINE

5-OXO-1-(3-AMINOPHENYL)-2-PYRAZOLINE-3-CARBOXYLIC ACID

PENTACHLOROANILINE

PENTAETHYLENEHEXAMINE

PENTAFLUOROANILINE

1,5-PENTAMETHYLENE DIAMINE

PENTYLAMINES,MIXED

O-PHENETIDINE

PHENYL ANTHRANILATE

N-PHENYL-N-SEC-BUTYLPHENYLENEDIAMINE

D-(-)-A-PHENYLGLYCINE

DL-A-PHENYLGLYCINE

4-PICOLYLAMINE

2-PICOLYLAMINE

3-PICOLYLAMINE

POLYOXYPROPYLENEDIAMINE

1,2-PROPANEDIAMINE

1,3-PROPANEDIAMINE

SODIUM ARSANILATE

4-SULFOANTHRANILIC ACID

3,3',4,4'-TETRAAMINOBIPHENYL,TECHNICAL

3,3',4,4'-TETRAAMINODIPHENYL ETHER

TETRAETHYLENEPENTAMINE

TETRAFLUORO-M-PHENYLENEDIAMINE

TETRAFLUORO-P-PHENYLENEDIAMINE

2,3,4,6-TETRANITROANILINE

2-THIAZYLAMINE

P,P-THIOBIS(4-AMINO-O-BENZENESULFONIC ACID)

THIODIGLYCOL-BIS-B-AMINO CROTONATE

6,6-THIODIMETANILIC ACID

TOLUAZOTOLUIDINE

TOLUENE,3,4-DIAMINE

2,6-TOLUENEDIAMINE

TOLUENEDIAMINES, MIXED

4-TOLUENESULFONAMIDO-1-AMINOANTHROQUINONE-SULFONIC ACID

P-TOLUIDINE-M-SULFONIC ACID

O-TOLUIDINE-M-SULFONIC ACID

6-(P-TOLUIDINO) METANILIC ACID

4-M-TOLYLENDIAMINE

O-TOLYLENDIAMINE

2,4,6-TRIAMINOPYRIDINE

2,4,6-TRIBROMOANILINE

TRIETHYL AMINOETHYL CELLULOSE

TRIETHYLENETETRAMINE

M-(TRIFLUOROMETHYL) ANILINE

O-(TRIFLUOROMETHYL) ANILINE

TRIMETHYLAMINOPROPYL PIPERAZINE

L-TYROSINE

M-XYLENEDIAMINE

2,4-XYLIDINE-5-SULFONIC ACID

M-XYLIDINESULFONIC ACID

4-(2,5-XYLYLAZO)-O-TOLUIDINE

4-(XYLYLAZO)XYLIDENE,MIXED

SECONDARY AMINES

N-((2-(4-AMINO-N-ETHYL)M-TOLUIDINO)ETHYL)METHANE SULFONAMIDE

2-(4-AMINO-N-ETHYL-M-TOLUIDINO)ETHYL SULFATE

5-AMINO-2-(P-TOLUIDINO)BENZENESULFONIC ACID

N-(4-AMINO-3-BROMO-1-ANTHROQUINONYL-P-TOLUIDINESULFONIC ACID)

2-AMINOETHYLMERCAPTOACETATE

2,2'-DI-(3-AMINOPROPOXY) ETHYL ESTER

7-ANILINO-4-HYDROXYL-2-NAPHTHALENESULFONIC ACID

N,N-(1,5-ANTHRAQUINONYLENE DIANTHRANILIC ACID

BARIUM DIPHENYLAMINE SULFONATE

2-(BENZYLAMINO)ETHANOL

L-2-BENZYLAMINO-1-PROPANOL

DL-2-BENZYLAMINO-1-PROPANOL

N-BENZYLANILINE

N,N-BIS(1,4-DIMETHYLPENTYL)-P-PHENYLENEDIAMINE

DI-N-BUTYLAMINE

P-(N-BUTYLAMINO)BENZOIC ACID ETHYL ESTER

N-BUTYLETHANOLAMINE

N-BUTYLETHYLAMINE

1,1'-DIAMINO-4,4-DIANTHRAQUINONYLIMINE

5,5'-DIBENZAMIDO-1,1'IMINODIANTHRAQUINONE

4,5'-DIBENZAMIDO-1,1'IMINODIANTHRAQUINONE

N,N-DIBENZYLMETHYLAMINE

N',N'-DIETHYL-1,4-PENTANEDIAMINE

10,11-DIHYDRO-5-(3-(METHYLAMINOPROPYL)-5H-DIBENZO(A,D)CYCLOHEPTENE-5-OL

DIISOBUTYLAMINE

N,N'-DIISOPROPYL-P-PHENYLENEDIAMINE

DIISOPROPYLAMINE

N,N-DIMETHYL-M-TOLUIDINE

N,N-DIMETHYLETHYLENEDIAMINE

DIPENTYLAMINE

DIPHENYLAMINE,2-CARBOXYLIC ACID

P-DIPHENYLAMINEDIAZONIUM SULFATE

DIPROPYLAMINE

2,2-DIPYRIDYLAMINE

DODECYLANILINE

2-ETHYLAMINOETHANOL

ETHYLETHANOLAMINE

DI-N-HEXYLAMINE

3(N-(2-HYDROXYETHYL)ANILINO)PROPIONITRILE

N-2-HYDROXYETHYLDIETHYLENETRIAMINE

N-(P-HYDROXYPHENYL)GLYCINE

N-(2-HYDROXYPROPYL)ETHYLENEDIAMINE

6,6'-IMINOBIS(1-HYDROXY-3-NAPHTHALENESULFONIC ACID)

6,6'-IMINOBIS(1-NAPHTHOL-3-SULFONIC ACID)

IMINOBISDIACETIC ACID

3,3'IMINOBISPROPYLAMINE

1,1'-IMINODI-2-PROPANOL

IMINODIACETIC ACID

IMINODIACETONITRILE

IMINODIBENZYL

1,1'-IMIODI-2-PROPANOL

2-ISOPROPYLAMINOETHANOL

ISOPROPYLAMINOETHANOLS,MIXED

N-ISOPROPYLANILINE

ISOPROPYLETHANOLAMINE

4-METHOXYPHENYL ETHYLAMINE

N-METHYL TAURINE

P-(METHYLAMINO)BENZOIC ACID

N-METHYLAMINOACETIC ACID

METHYLAMINODIMETHYLACETAL

2-METHYLAMINOETHANOL

1-NAPHTHALENE METHYLAMINE

5-NITRO-2-P-TOLUIDINOBENZENESULFONIC ACID

2-NITRODIPHENYLAMINE

4-NITRODIPHENYLAMINE

2-NITRODIPHENYLAMINE-4-SULFONANILIDE

P-NITROSODIPHENYLAMINE

N-ORTYLETHANOLAMINE

1-((7-OXO-7H-BENZ(DI)ANTHRACEN-3-XL)AMINO)ANTHRAQUINONE

PENTAETHYLENEHEXAMINE

D-(-)-PHENYLGLYCINE

D-(-)PHENYLGLYCINE

N,N'-DI-SEC-BUTYL-O-PHENYLENEDIAMINE

N,N'-DI-SEC-BUTYL-P-PHENYLENEDIAMINE

DI-SEC-BUTYLAMINE

4,4'-DI-SEC-BUTYLAMINODIPHENYLMETHANE

SODIUM DIPHENYLAMINESULFONATE

TERT-BUTYLAMINOETHYL METHACRYLATE

TETRAETHYLENEPENTAMINE

P-(P-TOLUENESULFONAMIDO)DIPHENYLAMINE

DI-P-TOLUIDENOTEREPHTHALIC ACID

1,4-DI-P-TOLUIDINOANTHRAQUINONE

O-TOLYLETHANOLAMINE

TRIETHYL CYCLOTRIMETHYLENE TRIAMINE

TRIETHYLENETETRAMINE

A,A,A,-TRIFLUORO-N-PHENYL-M-TOLUIDINE

3-(TRIFLUOROMETHYL)DIPHENYLAMINE

TERTIARY AMINES

N-ACETOXYETHYL-N-CYANOETHYL ANILINE

AMYL-P-DIMETHYLAMINOBENZOATE

ANILINE,PROPOXYLATED

N-BENZYL-DIETHANOLAMINE

3-(4-N-BENZYLAMINO-N-METHYLPHENYLAZO)-1,2,4 TRIAZOLE

4,4 BIS(DIETHYLAMINO)BENZHYDROL SALT 2,7-NAPHTHALENEDISULFONIC ACID MIXTURE

N,N-BIS(DIHYDROXYETHYL)-3-ACETAMIDO-6-METHOXY ANILINE

N-BIS(HYDROXYETHYL)AMINO ALKANOL

N,N'-BIS(3-DIMETHYLAMINOPROPYL)DITHIO-OXAMIDE

3'-(BIS-(2HYDROXYETHYL)AMINO)ACETANILIDE

4-BUTYL-A(-DIMETHYLAMINO)O-CRESOL

N-BUTYLDIETHANOLAMINE

3-CHLORO-N,N-DIMETHYLPROPYLAMINE

N-(2-CHLOROETHYL)-N-ETHYLANILINE

(4-(2-CHLOROETHYL)ETHYLAMINO-O-TOLUALDEHYDE

N-(B-CYANOETHYL)-N-ETHYL-M-TOLUIDINE

N-(B-CYANOETHYL)-N-ETHYLANILINE

N-(B CYANOETHYL)-N-METHYLANILINE

N-CYANOETHYL-N-BUTYLANILINE

N-CYANOETHYL-N-HYDROXYETHYL-M-TOLUIDINE

2-DIBUTYLAMINOETHANOL

DIETHANOLGLYCINE,SODIUM SALT

3-((P-DIETHYLAMINO)PHENYLAZO)-1-H-1,2,4-TRIAZOLE

2-(DIETHYLAMINO)PROPIOPHENONE

5-DIETHYLAMINO-2-AMINOPENTANE

5-DIETHYLAMINO-2-PENTANONE

P-DIETHYLAMINOBENZENEDIZONIUM CHLORIDE

2-DIETHYLAMINOETHANOL

2-(2-DIETHYLAMINOETHOXY)ETHANOL

2-DIETHYLAMINOETHYL ACRYLATE

B-DIETHYLAMINOETHYL MERCAPTAN

2-DIETHYLAMINOETHYL METHACRYLATE

N,N-DIETHYLTOLUENE-2,5-DIAMINE,MONOHYDROCHLORIDE

DIETYLAMINOETHYL CELLULOSE

DIISOPROPYLAMINOETHANOL

N,N-DIMETHYL-P-PHENYLAZOANILINE

A-(DIMETHYLAMINO)-O-CRESOL

2((-2-DIMETHYLAMINO)ETHYL)AMINOPYIIDINE

1-(DIMETHYLAMINO)PHENYLBUTYRONITRILE

5-DIMETHYLAMINO-1-NAPHTHALENESULFONYL CHLORIDE

3-DIMETHYLAMINO-1-PROPANOL

2-DIMETHYLAMINO-2-METHYL-1-PROPANOL

DIMETHYLAMINO-2-PROPANOL

2-DIMETHYLAMINOETHANOL

DIMETHYLAMINOETHOXYETHANOL

DIMETHYLAMINOETHYL ACRYLATE

DIMETHYLAMINOETHYL METHACRYLATE

3-DIMETHYLAMINOPROPIONITRILE

DIMETHYLPROPANOLAMINE

2,2-DIPHENYL-4-DIMETHYLAMINOVALERONITRILE

ETHANOLDIGLYCINE,DISODIUM SALT

ETHYL PHENYL ETHANOLAMINE

N-ETHYL-N-HYDROXYETHYL-M-TOLUIDINE

N-ETHYL-N-HYDROXYETHYL-1,4-PENTANEDIAMINE

5-(N-ETHYL-N-HYDROXYETHYLAMINO-2-PENTANONE)

ETHYLDIETHANOLAMINE

ETHYLENEDIAMINETETRAACETIC ACID A-SALTS

1,1',1'',1'''-(ETHYLENEDINITRILO)TETRA-2-PROPANOL

2-ETHYLHEXYL-P-N,N-DIMETHYLAMINOBENZOATE

P((2-HYDROXYETHYL)METHYLAMINO)BENZENE-DIAZONIUM CHLORIDE

N-HYDROXYETHYL-N-CYANOETHYLANILINE

N-HYDROXYETHYLETHYLENEDIAMINETRIACETIC ACID AND SALTS AND CHELATES

ISOPROPYLAMINOETHANOLS,MIXED

ISOPROPYLDIETHANOLAMINE

METHYL PHENYLETHANOLAMINE

4,4'-METHYLENEBIS(N,N-DIMETHYL-2-NITROANILINE)

2,2'-(METHYLIMINO)DIETHANOL

N-METHYLIMINODIACETIC ACID

1,1,1-NITRILOTRI-2-PROPANOL

NITRILOTRIACETIC ACID AND SALTS

OCTYL DIMETHYLAMINE

1,1'-((7-OXO-7H-BENZ(DE)ANTHRACEN-3,9-YLENE)DIIMINO)DIANTHRAQUINONE

PERFLUOROTRIBUTYLAMINE

SODIUM N,N-DIMETHYLSULFANILATE

2,6-DI-TERT-BUTYL-A-DIMETHYLAMINO-P-CRESOL

TETRAHYDROXYETHYL ETHYLENEDIAMINE

TETRAKIS HYDROXYETHYLETHYLENEDIAMINE

N,N,N',N'-TETRAKIS(2-HYDROXYPROPYL)ETHYLENEDIAMINE

N,N,N',N'-TETRAMETHYL-P-PHENYLENEDIAMINE

N,N,N',N'-TETRAMETHYL-1,3-BUTANEDIAMINE

M-TOLYLDIETHANOLAMINE

2,2'(M-TOLYLIMINO)DIETHANOL

TONOPHOSPHAN

TRI-M-BUTYLAMINE

TRIPENTYLAMINE

TRIPROPYLAMINE

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

TRIS(DIMETHYLAMINOPHENYL)PHOSPHINE

PRIMARY AMINES

11320*	(C. I. SOLVENT ORANGE 4 OR CHRYSOIDINE R)
13260	(C. I. ACID BROWN 265)
13265*	(C. I. MORDANT BROWN 49)
13280	(C. I. ACID BROWN 145)
13295	(C. I. MORDANT BROWN 11)
13305	(C. I. MORDANT BROWN 25)
13320	(C. I. DIRECT BROWN 53)
13355	(C. I. ACID RED 74)
13361*	(C. I. ACID GREEN 35)
13420	(C. I. ACID GREEN 45)
13425*	(C. I. ACID GREEN 12)
14045	(C. I. MORDANT YELLOW 12)
14155*	(C. I. DIRECT GREEN 28)
16070	(C. I. MORDANT BROWN 61)
17000	(C. I. ACID BLUE 70)
17020	(C. I. ACID RED 54)
17100	(C. I. ACID BROWN 90)
17190	(C. I. ACID VIOLET 2)
17250	(C. I. MORDANT BLUE 44)
17255	(C. I. ACID BLUE 42)
17780	(C. I. DIRECT RED 118)
17785	(C. I. DIRECT RED 126)
17800	(C. I. DIRECT RED 147)
17805	(C. I. DIRECT RED 145)
17815	(C. I. DIRECT RED 216)
17820*	(C. I. DIRECT RED 123)
17830	(C. I. DIRECT RED 144)

17840	(C. I. DIRECT ORANGE 75)
18120	(C. I. ACID BLUE 21)
19500	(C. I. DIRECT RED 142)
19575	(C. I. DIRECT RED 168)
19590	(C. I. DIRECT RED 119)
20091	(C. I. DIRECT BROWN 50)
20095	(C. I. ACID BROWN 5)
20111	(C. I. ACID BROWN 17)
20120	(C. I. MORDANT BROWN 69)
20130	(C.I. DIRECT ORANGE 24)
20250	(C. I. ACID BROWN 83)
20345	(C. I. ACID BLACK 16)
20415	(C. I. ACID BLUE 87)
20435	(C. I. ACID BLUE 128)
21010*	(C. I. SOLVENT BROWN 12)
21500	(C. I. DIRECT BROWN 184)
21510	(C. I. DIRECT YELLOW 25)
21530	(C. I. DIRECT BLACK 90)
21540	(C. I. DIRECT BLACK)
22030	(C. I. DIRECT BROWN 86)
22040	(C. I. DIRECT BROWN 56)
22045	(C. I. DIRECT BROWN 165)
22170	(C. I. DIRECT RED 74)
22180	(C. I. DIRECT RED 42)
22190	(C. I. DIRECT ORANGE 101)
22200	(C. I. DIRECT RED 60)
22205	(C. I. DIRECT RED 45)
22305	(C. I. DIRECT RED 29)

22315	(C. I. DIRECT GREEN 60)
22325	(C. I. DIRECT BROWN 60)
22405	(C. I. DIRECT RED 53)
22450	(C. I. DIRECT VIOLET 42)
22455	(C. I. DIRECT BLUE 230)
22460*	(C. I. DIRECT VIOLET 27)
22475	(C. I. DIRECT BLUE 16)
22485	(C. I. DIRECT BLUE 19)
22505	(C. I. DIRECT BLUE 42)
22555	(C. I. DIRECT VIOLET 4)
22565	(C. I. DIRECT BLUE 48)
22595	(C. I. DIRECT BLUE 64)
22620	(C. I. DIRECT BLACK 15)
22625	(C. I. DIRECT BLUE 177)
22775	(C. I. DIRECT BROWN 186)
22800	(C. I. DIRECT BLUE 226)
23050	(C. I. DIRECT RED 46)
23165	(C. I. DIRECT BLUE 166)
23360	(C. I. DIRECT BROWN 147)
23365*	(C. I. DIRECT ORANGE 6)
23370*	(C. I. DIRECT ORANGE 10)
23375*	(C. I. DIRECT ORANGE 6)
23380	(C. I. DIRECT ORANGE 7)
23505	(C. I. DIRECT RED 67)
23560	(C. I. DIRECT RED 21)
23600	(C. I. DIRECT RED 56)
23605	(C. I. DIRECT ORANGE 13)
23710	(C. I. DIRECT BLUE 21)

23810	(C. I. DIRECT BLUE 60)
23830	(C. I. DIRECT BLUE 231)
24065*	(C. I. DIRECT BLUE 136)
24080	(C. I. DIRECT VIOLET 13)
24110	(C. I. DIRECT BLACK 87)
24115	(C. I. DIRECT BLACK 86)
24130	(C. I. DIRECT GREEN 57)
24220	(C. I. DIRECT BLUE 65)
24310	(C. I. DIRECT BLUE 45)
24370	(C. I. DIRECT VIOLET 37)
24395	(CHICAGO BLUE 48)-DIRECT DYE
24405	(C. I. DIRECT BLUE 23)
24550	(C. I. DIRECT BLUE 164)
24875	(BRILLIANT MESSIAN PURPLE)-DIRECT DYE
25000	(C. I. DIRECT RED 169)
25005	(C. I. DIRECT RED 148)
25085	(C. I. DIRECT ORANGE 92)
25200*	(C. I. DIRECT ORANGE 73)
25210	(C. I. DIRECT RED 155)
25215	(C. I. DIRECT RED 156)
25225	(C. I. DIRECT YELLOW 66)
25240	(C. I. DIRECT RED 141)
25260	(C. I. DIRECT BROWN 146)
25265	(C. I. DIRECT BROWN 148)
25275*	(C. I. DIRECT RED 120)
25280	(C. I. DIRECT VIOLET 83)
25315	(C. I. DIRECT GREEN 55)
25320	(C. I. DIRECT RED 101)

25370	(C. I. DIRECT BROWN 152)
25385	(C. I. DIRECT VIOLET 6)
25400*	(C. I. DIRECT VIOLET 62)
25440	(C. I. DIRECT ORANGE 85)
26020	(C. I. SOLVENT ORANGE 14)
26230	(C. I. DIRECT BROWN 67)
26280	(C. I. DIRECT ORANGE 3)
26420	(C. I. ACID RED 104)
26680	(C. I. DIRECT BLUE 111)
26705	(C. I. DIRECT BLUE 123)
27050	(C. I. DIRECT BLUE 124)
27065	(C. I. ACID BLACK 20)
27095	(C. I. DIRECT BLUE 129)
27115	(C. I. DIRECT BLUE 122)
27140	(C. I. DIRECT BLUE 126)
27230	(C. I. ACID BLACK 23)
27600	(BRILLIANT GERANINE 2BN) - DIRECT DYE
27640	(C. I. DIRECT BLUE 140)
27660	(C. I. DIRECT VIOLET 5)
27710	(C. I. DIRECT BLACK 3)
27725	(C. I. DIRECT BLUE 132)
27740	(C. I. MORDANT BLACK 74)
27760	(C. I. DIRECT VIOLET 16)
27770	(C. I. DIRECT BLACK 96)
27780	(C. I. DIRECT RED 55)
27790	(C. I. ACID BLACK 18)
28211	(C. I. DIRECT RED 154)
28215*	(C. I. DIRECT RED 127)

28230*	(C. I. DIRECT RED 117)
28240*	(C. I. DIRECT RED 127A)
28250	(C. I. DIRECT RED 121)
28255*	(C. I. DIRECT ORANGE 74)
28270	(C. I. DIRECT VIOLET 72)
28280*	(C. I. DIRECT GREEN 38)
28290	(C. I. DIRECT GREEN 42)
28340	(C. I. DIRECT RED 130)
28360*	(C. I. DIRECT RED 152)
28480	(C. I. DIRECT GREEN 49)
28660	(C. I. DIRECT ORANGE 90)
28720	(C. I. DIRECT VIOLET 78)
28725	(C. I. DIRECT VIOLET 77)
29080	(C. I. DIRECT YELLOW 67)
29085	(C. I. DIRECT BROWN 126)
29090*	(C. I. DIRECT ORANGE 83)
29110*	(C. I. DIRECT RED 149)
30015*	(C. I. DIRECT BLACK 78)
30035	(C. I. DIRECT BROWN 7)
30040	(C. I. DIRECT BROWN 171)
30050	(C. I. DIRECT BROWN 79)
30055	(C. I. DIRECT BROWN 61)
30060	(C. I. DIRECT BROWN 20)
30070	(C. I. DIRECT BROWN 154)
30085	(DIAZO BROWN V)-DIRECT DYE
30090	(C. I. DIRECT BLUE 38)
30100	(C. I. DIRECT BROWN 17)
30120*	(C. I. DIRECT BROWN 154)

30125	(C. I. DIRECT BROWN 68)
30205	(C. I. DIRECT BLUE 43)
30220*	(C. I. DIRECT GREEN 39)
34260*	(C.I. DIRECT GREEN 51)
34280	(C.I. DIRECT GREEN 43)
34300	(DIAZO FAST ORANGE 56)-DIRECT DYE
34900	(C.I. ACID BROWN 85)
35020	(C.I. ACID BROWN 120)
35025	(C.I. ACID BROWN 119)
35040	(C.I. DIRECT BROWN 63)
35060	(C.I. DIRECT BROWN 39)
35085	(C.I. DIRECT BLUE 131)
35210	(C.I. DIRECT BROWN 127)
35260	(C.I. DIRECT BLACK 28)
35420	(SILK PRINTING BLACK M)-ACID DYE
35435*	(C.I. DIRECT BLACK 22)
35440	(C.I. DIRECT BLACK 32)
35460	(C.I. DIRECT BLUE 176)
35465	(C.I. DIRECT BLUE 175)
35520	(C.I. DIRECT BROWN 33)
35530	(C.I. DIRECT BROWN 70)
35535	(C.I. DIRECT BROWN 73)
35700	(C.I. DIRECT BROWN 43)
35710	(C.I. DIRECT BROWN 13)
35715	(C.I. DIRECT BROWN 14)
35810	(C.I. DIRECT BLACK 97)
35860	(C.I. DIRECT BLACK 77)
35865	(C.I. DIRECT BLACK 76)

36350	(C.I. DIRECT YELLOW 60)
40205	(C.I. DIRECT ORANGE 71)
40210*	(C.I. DIRECT ORANGE 61)
40215*	(C.I. DIRECT ORANGE 34,39,44,46 AND 60)
40220*	(C.I. DIRECT ORANGE 34)
40225	(C.I. DIRECT ORANGE 35)
40230	(C.I. DIRECT ORANGE 36)
40235	(C.I. DIRECT ORANGE 41)
40245	(C.I. DIRECT ORANGE 70)
40260*	(C.I. DIRECT ORANGE 37)
40265*	(C.I. DIRECT ORANGE 37)
40270	(C.I. DIRECT RED 76)
40275	(C.I. DIRECT RED 187)
40290*	(C.I. DIRECT RED 111,112 OR C.I. DIRECT BROWN 76)
40295	(DIAMINE FAST BROWN GB)-DIRECT DYE
42750*	(C.I. ACID BLUE 110)
44035	(C.I. ACID BLUE 108)
46030	(C.I. BASIC YELLOW 6)
46035	(C.I. BASIC ORANGE 4-11)
46045	(C.I. BASIC ORANGE 15)
50210	(C.I. BASIC VIOLET 8)
50235	(C.I. BASIC VIOLET 12)
50325	(C.I. ACID VIOLET 50)
50375	(C.I. BASIC RED 6)
50440	(C.I. OXIDATION BASE 1 OR C.I. PIGMENT BLACK 1)
56210	(C.I. MORDANT YELLOW 33)
60705	(C.I. VAT RED 18)
60880	(C.I. MORDANT BLUE 24)

61130	(C.I. ACID BLUE 150)
61135*	(C.I. ACID BLUE 127)
61140	(C.I. DISPERSE VIOLET 6)
62005	(C.I. ACID BLUE 56)
62010	(C.I. ACID VIOLET 36)
62020*	(C.I. ACID VIOLET 41)
62035	(C.I. DISPERSE BLUE 5)
62080*	(C.I. SOLVENT BLUE 13)
62095	(C.I. ACID BLUE 49)
62100	(C.I. SOLVENT BLUE 12)
62135	(C.I. ACID BLUE 53)
62145	(C.I. ACID BLUE 51)
62155	(C.I. ACID BLUE 111)
64515*	(C.I. ACID BLUE 81)
65005*	(C.I. ACID BLACK 48)
67105	(C.I. VAT BLUE 31)
67110	(C.I. VAT BLUE 30)
69850	(C.I. VAT GREEN 11)
30225	(C. I. DIRECT GREEN 58)
30240	(C. I. DIRECT BLACK 11)
30270	(C. I. DIRECT BLACK 131)
30275	(C. I. ACID BLACK 66)
30285	(C. I. DIRECT GREEN 10)
30290	(C. I. DIRECT GREEN 12)
30305	(C. I. DIRECT GREEN 19)
30325	(C. I. DIRECT BROWN 75)
30330	(C. I. DIRECT GREEN 7)
30340	(C. I. DIRECT BLUE 51)

30350	(C. I. DIRECT BLUE 11)
30355	(C. I. ACID BLACK 70)
30365	(C. I. DIRECT BROWN 69)
30380	(C. I. DIRECT GREEN 20)
30390	(C. I. DIRECT BLUE 39)
30395	(C. I. DIRECT BLACK 20)
31500	(C. I. DIRECT BROWN 138)
31505	(C.I. DIRECT BROWN 132)
31510	(C. I. DIRECT BROWN 153)
31515	(C. I. DIRECT BROWN 166)
31545	(C. I. DIRECT BLACK 10)
31565	(C. I. DIRECT BLACK 9)
31575	(C. I. DIRECT BLACK 2)
31580	(C. I. DIRECT BLACK 21)
31595	(C. I. DIRECT BLACK 1)
31635	(C. I. DIRECT BLUE 33)
31665*	(C. I. DIRECT BLACK 36)
31685	(C. I. DIRECT BROWN 151)
31705	(C. I. DIRECT BROWN 57)
31720	(C. I. DIRECT BROWN 62)
31730	(C. I. DIRECT BROWN 26)
31785	(C. I. DIRECT BROWN 46)
31790	(C. I. DIRECT GREEN 21)
31810	(C. I. DIRECT BLACK 27)
31850	(C. I. DIRECT BLACK 83)
31860	(C. I. DIRECT BROWN 93)
31885	(C. I. DIRECT BROWN 52)
31951	(C.I. DIRECT BLUE 183)

34000 (C. I. DIRECT BLACK 48)

34005 (C. I. DIRECT BLUE 133)

34015 (C. I. DIRECT BROWN 32)

34020 (C. I. DIRECT BROWN 99)

34025 (C. I. DIRECT RED 103)

34095 (C. I. DIRECT BLUE 121)

34125 (C. I. DIRECT BLUE 110)

34130 (C. I. DIRECT BLUE 82)

34145 (C. I. DIRECT BLUE 72)

34155 (C. I. DIRECT BLACK 49)

34175 (C. I. DIRECT BLUE 239)

11240 N-(5-ACETAMIDO-2,4-DIAMINOPHENYL)-P-QUINONEIMINE

(C. I. DISPERSE ORANGE 7)

17040 5-((4-(ACETYLAMINO))-AZO)-6-AMINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACID,SODIUM SALT

(C. I. ACID RED 231)

17080 5-((4-(ACETYLAMINO)-2-((4-METHYLPHENYLSULFONYL)PHENYL)AZO)-6-AMINO-4-HYDROXY-,2-NAPHTHALENES
ULFONIC ACID
(C. I. ACID VIOLET 14)

17065 * 5-((4-(ACETYLAMINO)-2-(N-ETHYLSULFONANILIDE)AZO)-6-AMINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACI
D,SODIUM SALT
(C. I. ACID RED 32)

17035 5-((5-(ACETYLAMINO)-2-SULFOPHENYL)AZO)-6-AMINO-4-HYDROXY-,2-NAPHTHALENESULFONIC ACID

(C. I. ACID RED 30)

62125 * 4-((4-(ACETYLAMINO)PHENYL)AMINO)-1-AMINO-9,10-DIHYDRO-9,10-DIOXO-,2-ANTHRACENESULFONIC ACID

(C.I. ACID BLUE 40)

62165 4-((4-(ACETYLAMINO)PHENYL)AMINO)-1-AMINO-9,10-DIHYDRO-9,10-DIOXO-,2-ANTHRACENESULFONIC ACID

(C.I. ACID BLUE 40)

62130 * 4-((4-(ACETYLMETHYLAMINO)PHENYL)AMINO)-1-AMINO-9,10-DIHYDRO-9,10-DIOXO-,2-ANTHRACENESULFONIC
ACID
(C.I. ACID BLUE 41)

22306 5-((4'-((6-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-2-HYDROXY--B
ENZOIC ACID
(C. I. DIRECT RED 33)

22311 * 5-((4'-((7-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-2-HYDROXY-BE
NZOIC ACID
(C. I. DIRECT BROWN 2)

27720 * 3(OR 5)-((4-((7-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)-1-NAPHTHALENYL)AZO)-2-HYDROXY BE
NZOIC ACID,DISODIUM SALT
(C. I. DIRECT BLACK 51)

24170 3-((4'-((5-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)-3,3'-DIMETHOXY(1,1'-BIPHENYL)ACID,DIS
ODIUM SALT
(C. I. DIRECT BLUE 12)

24175 * 3-((4'-((6-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)-3,3'-DIMETHOXY(1,1-BIPHENYL)-4-YL)AZO
)-4-HYDROXY-1-NAPHTHALENESULFONIC ACID
(C. I. DIRECT BLUE 151)

23705 3-((4'-((6-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)-3,3'-DIMETHYL(1,1'-BIPHENYL)-4-YL)AZO
)-4-HYDROXY-,1-NAPHTHALENESULFONIC ACID
(C. I. DIRECT BLUE 3) AZO)-4- HYDROXY-, NAPHTHALENESULFONIC ACID

31600 6-((7-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)-3-((4-((4-AMINO-6(OR7)-SULFO-1-NAPHTHALENY
L)AZO)PHENYL)AZO)-4-HYDROXY-2-NAPHTHALENESULFONIC ACID,TRISODIUM SALT
(C. I. DIRECT BLACK 80)

34135 5-((4-((4-((6-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHYL)AZO)-1-NAPHTHYL)AZO)-6-SULFO-1-NAPHTHYL)AZO
)SALICYLIC ACID
(C. I. DIRECT BLUE 148)

34140 * 3-((4-((4-((6-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHYL)AZO)-6-SULFO-1-NAPHTHYL)AZO)-1-NAPHTHYL)AZO
)-1,5-NAPHTHALENEDISULFONIC ACID
(C. I. DIRECT BLUE 71)

34179 3-((4-((4-((7-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHYL)AZO)-6-SULFO-1-NAPHTHYL)AZO)-1-NAPHTHYL)AZO
)-1,5-NAPHTHALENEDISULFONIC ACID
(C. I. DIRECT BLACK 103)

30310 5-((4'-((8-AMINO-1-HYDROXY-7-((O-NITROPHENYL)AZO)-3,6-DISULFO-2-NAPHTHYL)AZO)-4-BIPHENYLYL)A
ZO)SALICYLIC ACID
(C. I. DIRECT GREEN 9)

30315 * 5-((4'-((8-AMINO-1-HYDROXY-7-((P-NITROPHENYL)AZO)-3,6-DISULFO-2-NAPHTHYL)AZO)-4-BIPHENYLYL)A
ZO)SALICYLIC ACID
(C. I. DIRECT GREEN 8)

26300 1-((4-((4-AMINO-1-NAPHTHALENYL)AZO)-1-NAPHTHALENYL)AZO)-NAPHTHALENEDISULFONIC ACID,SODIUM SA
LT
(C. I. ACID BLACK 7)

67915 6-AMINO-10,12-DICHLORO-NAPHTH(2,3-C)ACRIDINE-5,8,14(13H)-TRIONE

(C.I. VAT BLUE 33)

67910 6-AMINO-11-CHLORO-NAPHTh(2,3-C)ACRIDINE-5,8,14(13H)-TRIONE

(C.I. VAT BLUE 32)

56205 6-AMINO-2,3-DIHYDRO-2-(4-METHYLPHENYL)-1,3-DIOXO-,1H-BENZ(DE)ISOQUINOLINE-5-SULFONIC ACID

(C.I. ACID YELLOW 7)

17060 5-((4-AMINO-2-(N-ETHYLSULFONANILIDE))AZO)-6-AMINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACID,SODIUM SALT
(C. I. ACID VIOLET 11)

34080 8-((4-((4-AMINO-2-CHLORO-5-METHOXYPHENYL)AZO)-6-SULFO-1-NAPHTHYL)AZO)-5-((1-HYDROXY-3-SULFO-2-NAPHTHYL)AZO)-2-NAPHTHALENESULFONIC ACID
(C. I. DIRECT BLUE 127)

11035 4-((4-AMINO-2-CHLOROPHENYL)AZO)-N,N-DIMETHYL-BENZENAMINE

(C. I. DISPERSE BLACK 7)

11220 2,2'-((4-((4-AMINO-2-METHOXYPHENYL)AZO)-M-TOLYL)IMINO)DIETHANOL

(C. I. DISPERSE BLACK 8)

60700 1-AMINO-2-METHYL-9,10-ANTHRACENEDIONE

(C.I. DISPENSE ORANGE 11)

50330 9-((4-AMINO-2-SULFOPHENYL)AMINO)-11-METHYL-7-PHENYL-5-(PHENYLAMINO)-4-SULFO-,BENZO(A)PHENAZINIUM
(C.I. ACID BLUE 61)

34295 -((4-((4-AMINO-2-SULFOPHENYL)AZO)-2-ETHOXY-6-SULFO-1-NAPHTHALENYL)AZO)-7-((4-((4,5-DIHYDRO-3-METHYL-5-OXO-1-PHENYL-1H-PYRAZOL-4-YL)AZO)BENZOYL)AMINO)-4-HYDROXY-,2-NAPHTHALENE
(C.I. DIRECT GREEN 50)

27680 * 7-AMINO-3'-(PHENYLAZO)-3,7'-AZOBIS(4-HYDROXY-2-NAPHTHALENESULFONIC ACID

(C. I. DIRECT RED 16)

13015 6-AMINO-3,4'-AZODIBENZENESULFONIC ACID

(C. I. ACID YELLOW 9 OR C. I. FOOD YELLOW 2)

35255 4-AMINO-3,6-BIS((4-((2,4-DIAMINOPHENYL)AZO)PHENYL)AZO)-5-HYDROXY-,2,7-NAPHTHALENEDISULFONIC ACID-
(C.I. DIRECT BLACK 19)

23515 4-AMINO-3-((-4'-((2,4-DIHYDROXYPHENYL)AZO)-3,3'DIMETHYL(1,1'-BIPHENYL)-4-YL)AZO)-1-NAPHTHALENESULFONIC ACID,SODIUM SALT
(C. I. DIRECT RED 68)

22145 * 4-AMINO-3-((4'-((1-HYDROXY-4-SULFO-2-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-,1-NAPHTHALENESULFONIC ACID
(C. I. DIRECT RED 10)

24105 4-AMINO-3-((4'-((1-HYDROXY-4-SULFO-2-NAPHTHALENYL)AZO)-3,3'-DIMETHOXY (1,1'-BIPHENY 1)-4-YL)AZO)-,1-NAPHTHALENESULFONIC ACID
(C. I. DIRECT VIOLET 32)

23520 4-AMINO-3-((4'-((1-HYDROXY-4-SULFO-2-NAPHTHALENYL)AZO)-3,3'-DIMETHYL(1,1'-BIPHENYL)-4-YL)AZO)-1-NAPHTHALENESULFONIC ACID.
(C. I. DIRECT VIOLET 21)

30235 * 4-AMINO-3-((4'-((2,4-DIAMINOPHENYL)AZO)-4-BIPHENYLYL)AZO)-5-HYDROXY-6-(PHENYLAZO)-2,7-NAPHTHALENEDISULFONIC ACID
(C. I. DIRECT BLACK 38)

22155 * 4-AMINO-3-((4'-((2-AMINO-8-HYDROXY-6-SULFO-1-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-,1-NAPHTHALENESULFONIC ACID
(C. I. DIRECT RED 13)

22150 4-AMINO-3-((4'-((2-HYDROXY-8-SULFO-1-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-,1-NAPHTHALENESULFONIC ACID
(C. I. DIRECT RED 17)

30245 * 4-AMINO-3-((4'-((4,6-DIAMINO-M-TOLYL)AZO)-4-BIPHENYL)AZO)-5-HYDROXY-6-(PHENYLAZO)-2,7-NAPHTHA-LENEDISULFONIC ACID
(C. I. DIRECT BLACK 4)

22590 * 5-AMINO-3-((4'-(7-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-4-HYDROXY-2,7-NAPHTHALENEDISULFONIC ACID.
(C. I. DIRECT BLUE 2)

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27700 * 6-AMINO-3-((4-((P-AMINOPHENYL)AZO)-6-METHOXY-M-TOLYL)AZO)-4-HYDROXY-2-NAPHTHALENESULFONIC ACID
(C. I. DIRECT BLACK 17)

20495 * 4-AMINO-3-((4-AMINOPHENYL)AZO)-5-HYDROXY-6-(PHENYLAZO)-,2,7-NAPHTHALENEDISULFONIC ACID

(C. I. ACID GREEN 20)

20440 * 4-AMINO-3-(2,5-DICHLOROPHENYL)AZO)-5-HYAROXY-6-(1-NAPHTHALFNYLAZO)-,2,7-NAPHTHALENEDISULFONIC ACID
(C. I. ACID GREEN 19 OR C. I. MORDANT GREEN 11)

62105 * 2-((4-AMINO-3-BROMO-9,10-DIHYDRO-9,10-DIOXO-1-ANTHRACENYL)AMINO)-5-METHYL-,BENZENESULFONIC ACID
(C.I. ACID BLUE 78)

27110 8-((4-AMINO-3-METHOXYPHENYL)AZO)-6-ETHOXY-6'-HYDROXY-5,5'-AZOUT-2-NAPHTHAENESULFONIC ACID

(C. I. DIRECT BLUE 130)

42700 ((4-((4-AMINO-3-METHYLPHENYL)(4-((SULFO-2-NAPHTHALENYL)AMINO)-2,5-CYCLOHEXADIEN-1-YLIDENE)METHYL)PHENYL)AMINO),NAPHTHALENESULFONIC ACID
(C.I. DIRECT BLUE 41)

42520 * 4-((4-AMINO-3-METHYLPHENYL)(4-IMINO-3-METHYL-2,5-CYCLOHEXADIEN-1-YLIDENE)METHYL)-2-METHYL-,BENZENAMINE
(C.I. BASIC VIOLET 2)

23510 3-AMINO-4-((4'-((1-AMINO-8-SULFO-2-NAPHTHALENYL)AZO)-3,3'-DIMETHYL(1,1'-BIPHENYL)-4-YL)AZO)-2,7-NAPHTHALENEDISULFONIC ACID.
(C. I. DIRECT RED 15)

23570 3-AMINO-4-((4'-((2-AMINO-6-SULFO-1-NAPHTHALENYL)AZO)-5,3'-DIMETHYL(1,1'-BIPHENYL)-4-YL)AZO)-2,7-NAPHTHALENEDISULFONIC ACID.
(C. I. DIRECT RED 34)

22195 * 3-AMINO-4-((4'-((4-(((4-METHYLPHENYL)SULFONYL)OXY)PHENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-,2,7-NAPHTHALENEDISULFONIC ACID.
(C. I. ACID ORANGE 45)

62075 1-AMINO-4-((4-DODECYLSULFOPHENYL)AMINO)-9,10-DIHYDRO-9,10-DIOXO-,2-ANTHRACENESULFONIC ACID

(C.I. ACID BLUE 138)

13445 3-AMINO-4-((M-SULFOPHENYL)AZO)-2,7-NAPHTHALENEDISULFONIC ACID

(C. I. FOOD YELLOW 7)

62045 * 1-AMINO-4-(CYCLOHEXYLAMINO)-9,10-DIHYDRO-9,10-DIOXO-,2- ANTHRACENESULFONIACID

(C.I. ACID BLUE 62)

62050 1-AMINO-4-(CYCLOHEXYLAMINO)-9,10-DIHYDRO-9,10-DIOXO-2-ANTHRACENECARBOXAMIDE

(C.I. DISPERSE BLUE 6)

61105 * 1-AMINO-4-(METHYLAMINO)-9,10-ANTHRACENEDIONA

(C.I. DISPERSE VIOLET 4)

61110 1-AMINO-4-(PHEYLAMINO)-9,10-ANTHRACENEDIONE

(C.I. DISPERSE BLUE 19)

60755 * 1-AMINO-4-HYDROXY-2-METHOXY-9,10-ANTHRACENEDIONE

(C.I. DISPERSE RED 4)

17235 * 5-AMINO-4-HYDROXY-3-((2-HYDROXY-3,5-DINITROPHENYL)AZO)-,2,7-NAPHTHALENESULFONIC ACID

(C. I. MORDANT GREEN 36)

17220 5-AMINO-4-HYDROXY-3-((2-HYDROXY-5-CHLOROPHENYL)AZO)-2,7-NAPHTHALENEDISULFONIC ACID,DISODIUM SALT
(C. I. MORDANT GREEN 28)

17225 5-AMINO-4-HYDROXY-3-((2-HYDROXY-5-NITROPHENYL)AZO)-,2,7-NAPHTHALENESULFONIC ACID

(C. I. MORDANT GREEN 17)

34170 * 7-AMINO-4-HYDROXY-3-((6(OR7)-SULFO-4((6(OR7)-1-NAPHTHALENYL)AZO)-2-NAPHTHALENESULFONIC ACID, TRISODIUM SALT
(C. I. DIRECT BLACK 56)

34146 * 7-AMINO-4-HYDROXY-3-((6(OR7)-SULFO-4-((6(OR7)-SULFO-4-((3-SULFOPHENYL)AZO)-1-NAPHTHALENYL)AZO)-1-NAPHTHALENYL)AZO)-2-NAPHTHALENESULFONIC ACID, TETRA SODIUM SALT
(C. I. DIRECT BLUE 74)

17200 * 5-AMINO-4-HYDROXY-3-(PHENYLAZO)-,2,7-NAPHTHALENEDISULFONIC ACID

(C. I. ACID RED 33 OR C. I. FOOD RED 12)

17070 6-AMINO-4-HYDROXY-5-((2-(PHENYLSULFONYL)PHENYL)AZO)-,2-NAPHTHALENESULFONIC ACID

(C. I. ACID RED 42)

60710 * 1-AMINO-4-HYDROXY-9,10-ANTHRACENEDIONE

(C.I. DISPERSE RED 15)

22135 5-((4'-((1-AMINO-4-SULFO-2-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-2-HYDROXY-3-METHYL BENZOIC ACID
(C. I. DIRECT ORANGE 25)

22130 * 5-((4'-((1-AMINO-4-SULFO-2-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-2-HYDROXY-,BENZOIC ACID
(C. I. DIRECT ORANGE 8)

23565 6-AMINO-5((4'-((2-AMINO-7-SULFO-1-NAPHTHALENYL)AZO)-3,3'-DIMETHYL(1,1'-BIPHENYL)-4-YL)AZO)-2-NAPHTHALENESULFONIC ACID DISODIUM SALT
(C. I. DIRECT RED 22)

30400 5-((4'-((6-AMINO-5-((2-CARBOXY-4-NITROPHENYL)AZO)-1-HYDROXY-3-SULFO-2-NAPHTHYL)AZO)-3,3'-DIMETHOXY-4-BIPHENYLYL)AZO)SALICYCLIC ACID
(C. I. DIRECT BLACK 91)

17030 6-AMINO-5-((4-AMINO-2-SULFOPHENYL)AZO)-4-HYDROXY-2-NAPHTHALENESULFONIC ACID,DISODIUM SALT

(C. I. ACID RED 34)

42685 2-AMINO-5-((4-AMINO-3-SULFOPHENYL)(4-IMINO-3-SULFO-2,5-CYCLOHEXADIEN-1-YLIDENE)METHYL)-3-METHYL-,BENZENESULFONIC ACID
(C.I. ACID VIOLET 19)

17025 * 6-AMINO-5-((4-NITRO-2-SULFOPHENYL)AZO)-4-HYDROXY-2-NAPHTHALENESULFONIC,DISODIUM SALT

(C. I. ACID VIOLET 1)

20480 * 4-AMINO-5-HYDROXY-3((4-NITROPHENYL)AZO)-6-(P-SULFOPHENYLAZO)-2,7-NAPHTHALENEDISULFONIC ACID, DISODIUM SALT
(C. I. ACID BLACK 41)

20460 * 4-AMINO-5-HYDROXY-3-((3-NITROPHENYL)AZO)-6-(PHENYLAZO)-2,7-NAPHTHALENEDISULFONIC ACID,DISODIUM SALT
(C. I. ACID BLUE 29)

30336 4-AMINO-5-HYDROXY-3-((4'-((4-HYDROXY-2-O-TOLUIDINOPHENYL)AZO)-4-BIPHENYLYL)AZO)-6-((P-SULFOPHENYL)AZO)-2,7-NAPHTHALENEDISULFONIC ACID
(C. I. ACID BLACK 94)

30280 * 4-AMINO-5-HYDROXY-3-((4'-((P-HYDROXYPHENYL)AZO)-4-BIPHENYLYL)AZO)-6-(PHENYLAZO)-2,7-NAPHTHALENEDISULFONIC ACID
(C. I. DIRECT GREEN 1)

20470 * 4-AMINO-5-HYDROXY-3-((4-NITROPHENYL)AZO)-6-(PHENYLAZO)-,2,7-NAPHTHALENEDISULFONIC ACID

(C. I. ACID BLACK 1)

17125 4-AMINO-5-HYDROXY-6-((2-HYDROXY-3,5-DINITROPHENYL)AZO)-,1-NAPHTHALENESULFONIC ACID

(C. I. MORDANT GREEN 14)

17130 4-AMINO-5-HYDROXY-6-((2-HYDROXY-5-METHYL-6-NITROPHENYL)AZO)-1-NAPHTHALENESULFONIC ACID,SODIU
M SALT
(C. I. MORDANT GREEN 30)

24280 * 4-AMINO-5-HYDROXY-6-((4'-((2-HYDROXY-1-NAPHTHALENYL)AZO)-3,3'-DIMETHOXY(1,1'-BIPHENYL)-4-YL)
AZO)-,1,3-NAPHTHALENEDISULFONIC ACID
(C. I. DIRECT BLUE 22)

30295 * 4-AMINO-5-HYDROXY-6-((4'-((P-HYDROXYPHENYL)AZO)-4-BIPHENYLYL)AZO)-3-((P-NITROPHENYL)AZO)-2,7
-NAPHTHALENEDISULFONIC ACID
(C. I. DIRECT GREEN 6)

20350 4-AMINO-5-HYDROXY-6-(1-NAPHTHALENYLAZO)-3-((4-SULFOPHENYL)AZO)-,1-NAPHTHALENESULFONIC ACID

(C. I. ACID BLACK 17)

34010 * 3-((4-((4-((4-AMINO-5-METHOXY-2-METHYLPHENYL)AZO)-6(OR?)-SULFO-1-NAPHTHALENYL)AZO)-1-NAPHTHA
LENYL)AZO)-1,5-NAPHTHALENDISULFONIC ACID,TRISODIUM SLT
(C. I. DIRECT BLUE 126)

30260 4-AMINO-6-((4'-((7-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHYL)AZO)-4-BIPHENYLYL)AZO)-5-HYDROXY-3-((P
-NITROPHENYL)AZO)-2,7-NAPHTHA-LENEDISULFONIC ACID
(C. I. ACID BLACK 69 OR C. I. DIRECT BLACK 41)

30345 4-AMINO-6-((4'-((7-AMINO-1-HYDROXY-3-SULFO-2-NAPHTHYL)AZO)-4-BIPHENYLYL)AZO)-5-HYDROXY-3-((P
-NITROPHENYL)AZO)-2,7-NAPHTHALENEDISULFONIC ACID
(C. I. DIRECT BLACK 14)

12210 * 3-AMINO-7-((2-HYDROXY-1NAPHTHYL)AZO)-2,8-DIMETHYL-5-PHENYLPHENAZINIUM CHLORIDE

(C. I. BASIC BLUE 16)

50205 3-AMINO-7-(DIMETHYLAMINO)-5-PHENYL-,PHENAZINIUM

(C.I. BASIC VIOLET 5)

31725 5-((4'-((4-((4-AMINO-7-SULFO-1-NAPHTHYL)AZO)-6-SULFO-1-NAPHTHYL)AZO)-4-BIPHENYLYL)AZO)SALICY
LIC ACID
(C. I. DIRECT BROWN 27)

17075 5-((2-((2-AMINO-8-HYDROXY-6-SULFO-1-NAPHTHALENYL)AZO)-4-SULFOPHENYL)SULFONYL)-2-HYDROXY-,BEN
ZOIC ACID
(C. I. MORDANT RED 24)

22310 * 5-((4'-((2-AMINO-8-HYDROXY-6-SULFO-1-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-2-HYDROXY-BE
NZOIC ACID
(C. I. DIRECT RED 1)

34180 3-((4-((4-((2-AMINO-8-HYDROXY-6-SULFO-1-NAPHTHALENYL)AZO)-7-SULFO-1-NAPHTHALENYL)AZO)-6-SULF
O-1-NAPHTHALENYL)AZO)-1,5-NAPHTHALENEDISULFONIC ACID, PENTASODIUM SALT
(C.I. DIRECT BLACK 74)

62085 * 2-((4-AMINO-9,10-DIHYDRO-3-METHYL-9,10-DIOXO-1-ANTHRACENYL)AMINO)-5-METHYL-,BENZENESULFONIC
ACID
(C.I. ACID BLUE 47)

62070 * 1-AMINO-9,10-DIHYDRO-4-((4-METHYL-2-SULFOPHENYL)AMINO)-9,10-DIOXO-,2-ANTHRACENE SULFONIC ACI
D
(C.I. ACID BLUE 145)

62035 1-AMINO-9,10-DIHYDRO-4-(METHYLAMINO)-9,10-DIOXO-2-ANTHRACENECARBOXAMIDE,

(C.I. DISPERSE BLUE 5)

62120 5-(((3-((4-AMINO-9,10-DIHYDRO-9,10-DIOXO-3-SULFO-1-ANTHRACENYL)AMINO)-4-METHOXYPHENYL)METHYL
)SULFONYL)-2-HYDROXY-,BENZOIC ACID
(C.I. MORDANT BLUE 48)

62055 * 1-AMINO-9,10-DIHYDRO-9,10-DIOXO-4-(PHENYLAMINO)-,2-ANTHRACENESULFONIC ACID

(C.I. ACID BLUE 25)

45215 N-(6-AMINO-9-(2-(ETHOXYCARBONYL)PHENYL)-7-METHYL-3H-XANTHEN-3-YLIDENE)-N-ETHYL-,ETHANAMINIUM

(C.I. BASIC RED 4)

45210 N-(6-AMINO-9-(2-(ETHOXYCARBONYL)PHENYL)-7-METHYL-3H-XANTHEN-3-YLIDENE)-N-METHYL-,METHANAMINI
UM
(C.I. BASIC RED 3)

51180 5-AMINO-9-(DIETHYLAMINO)-, BENZO(A)PHENOXAZIN-7-IUM,

(C.I. BASIC BLUE 12)

28260 3((4-((6-((4-AMINOBENZOYL)AMINO)-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)-3,5-DIMETHYLPHENYL)AZ
O)-1,5-NAPHTHALENEDISULFONIC ACID,TRISODIUM SALT
(C. I. DIRECT RED 150)

42755 AMINOMETHYL((4-((SULFOPHENYL)AMINO)PHENYL)(4-((SULFOPHENYL)IMINO)-2,5-CYCLOHEXADIEN-1-YLIDEN
E)METHYL)-,BENZENESULFONIC ACID
(C.I. ACID BLUE 22)

10445 AMINONITRO BENZENESULFONIC ACID

(C. I. SOLVENT GREEN 13)

42500 * 4-((4-AMINOPHENYL)(4-IMINO-2,5-CYCLOHEXADIEN-1-YLIDENE)METHYL)-,BENZENAMINE OR PARA MAGENTA
, PARA ROSANILINE
(C.I. BASIC RED 9)

42510 * 4-((4-AMINOPHENYL)(4-IMINO-2,5-CYCLOHEXADIEN-1-YLIDENE)METHYL)-2-METHYL-,ENZENAMINE

(C.I. BASIC VIOLET 14)

49000 * 2-(2-(4-AMINOPHENYL)-6-BENZOTHIAZOLYL)-6-METHYL-,7-BENZOTHIAZOLESULFONIC ACID

(C.I. DIRECT YELLOW 54)

11365 * 4-((P-AMINOPHENYL)AZO)-1-NAPHTHYLAMINE

(C. I. DISPERSE BLACK 1)

16580 * 3-((P-AMINOPHENYL)AZO)-4,5-DIHYDROXY-2,7-NAPHTHALENEDISULFONIC ACID

(C. I. ACID VIOLET 3)

34090 * 8-((P-AMINOPHENYL)AZO)-5'-((2-HYDROXY-6-SULFO-1-NAPHTHYL)AZO)-5,8'-AZODI-2-NAPHTHALENESULFONIC ACID
(C. I. DIRECT BLUE 120A)

14805 6-((P-AMINOPHENYL)AZO)-5-HYDROXY-1-NAPHTHALENESULFONIC ACID

(C. I. ACID BROWN 4)

11255 * 4-((P-AMINOPHENYL)AZO)-5-METHYL-O-ANISIDINE

(C. I. DISPERSE BLACK 2)

34085 * 3-((4-((4-((P-AMINOPHENYL)AZO)-6-SULFO-1-NAPHTHYL)AZO)-6-SULFO-1-NAPHTHYL)AZO)-4-HYDROXY-1-NAPHTHALENESULFONIC ACID
(C. I. DIRECT BLUE 120)

11025 4-((4-AMINOPHENYL)AZO)-N,N-DIMETHYL-BENZENAMINE

(C. I. DISPERSE BLACK 3)

17045 * 5-((4-(ACETYLAMINO)-2-SULFOPHENYL)AZO)-6-AMINO-4-HYDROXY-,2-NAPHTHELENESULFONIC ACID.

(C. I. ACID RED 37)

22120 * 3,3'-((1,1'-BIPHENYL)-4,4'-DIYLBIS(AZO))BIS(4-AMINO-,1-NAPHTHALENESULFONIC ACID

(C. I. DIRECT RED 28 OR CONGO RED)

22570 * 5,5'-((1,1'-BIPHENYL)-4,4'-DIYLBIS(AZO))BIS(6-AMINO-4-HYDROXY-,2-NAPHTHALENESULFONIC ACID

(C. I. DIRECT VIOLET 1)

22550 3,3'-((1,1'-BIPHENYL)-4,4'-DIYLBIS(AZO))BIS(7-AMINO-4-HYDROXY-,2-NAPHTHALENESULFONIC ACID.

(C. I. DIRECT VIOLET 12)

22580 (3,3'-(4,4'-BIPHENYLENEBIS(AZO))(6-AMINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACID

(C. I. DIRECT BLACK 29)

22920 4,4'-BIS((2,4-DIAMINO-5-NITROPHENYL)AZO)-(1,1'-BIPHENYL)-3,3'-DISULFONIC ACID.

(C. I. DIRECT ORANGE 4)

36030 5-((4-((4((DIAMINO((3-((2,4-DIAMINOPHENYL)AZO)PHENYL)AZO)PHENYL)AZO)SULFO-1-NAPHTHALENYL)AZO
)(1,1-BIPHENYL)-4-YL)AZO)-2-HYDROXY-,BENZOIC ACID
(C.I. DIRECT BROWN 25)

50240 * 3,7-DIAMINO-2,8-DIMETHYL-5-PHENYL-, PHENAZINIUM

(C.I. BASIC RED 2)

62015 * 1,4-DIAMINO-2-METHOXY-9,10-ANTHRACENEDIONE

(C.I. DISPERSE RED 11)

35660 * 5-((4'-((2,6-DIAMINO-3-((8-HYDROXY-3,6-DISULFO-7-((4-SULFO-1-NAPHTHALENGL)AZO)-2-NAPHTHALENY
L)AZO)-5-METHYLPHENYL)AZO)(1,1-BIPHENYL)-4-YL)AZO-2-HYDROXY-, BENZOIC ACID
(C.I. DIRECT BROWN 31)

30110 5-((4'-((2,6-DIAMINO-3-METHYL-5-((4-SULFOPHENYL)AZO)PHENYL)AZO)1,1'-BIPHENYL)-4-YL)AZO)-2-HY
DROXY BENZOIC ACID,DISODIUM SALT
(C. I. DIRECT BROWN 1A)

13250 * 2,4-DIAMINO-5-((2-HYDROXY-5-NITROPHENYL)AZO)BENZENESULFONIC ACID

(C. I. MORDANT BROWN 33)

13310 6-(2,4-DIAMINO-5-((2-HYDROXY-5-NITROPHENYL)AZO)PHENOXY)-2-NAPHTHALENESULFONIC ACID

(C. I. MORDANT BROWN 14)

30045 * 5-((4'((2,4-DIAMINO-5-((4-SULFOPHENYL)AZO)PHENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-2-HYDROXY BEN
ZOIC ACID,DISODIUM SALT
(C. I. DIRECT BROWN 1)

20090 4-((2,4-DIAMINO-5-(1-NAPHTHALENYLAZO)PHENYL)AZO)-,1-NAPHTHALENESULFONIC ACID

(C. I. DIRECT BROWN 37)

11300 2-((2,4-DIAMINO-5-CHLOROPHENYL)AZO)-4,6-DINITROPHENOL

(C. I. MORDANT BROWN 48)

62030 * 1,4-DIAMINO-5-NITRO-9,10-ANTHRACENEDIONE

(C.I. DISPERSE VIOLET8)

61100 * 1,4-DIAMINO-9,10-ANTHRACENEDIONE

(C.I. DISPERSE VIOLET 1)

63010 * 4,8-DIAMINO-9,10-DIHYDRO-1,5-DIHYDROXY-9,10-DIOXO-,2,6-ANTHRACENE-DISULFONIC ACID

(C.I. ACID BLUE 45)

63000 * 4,8-DIAMINO-9,10-DIHYDRO-1,5-DIHYDROXY-9,10-DIOXO-,2-ANTHRACENESULFONIC ACID

(C.I. ACID BLUE 43)

63610 4,5-DIAMINO-9,10-DIHYDRO-1,8-DIHYDROXY-9,10-DIOXO-,2,7-ANTHRACENESULFONICACID

(C.I. ACID BLUE 69)

62026 4,4'-((1,4-DIAMINO-9,10-DIHYDRO-9,10-DIOXO-2,3-ANTHRACENEDIYL)BIS(OXY))BIS-BENZENE SULFONIC ACID,DISODIUM SALT
(C.I. ACID VIOLET 42)

11335 2-((4,6-DIAMINO-M-TOLYL)AZO)-4,6-DINITROPHENOL

(C. I. MORDANT BROWN 4)

11290 * 2-((2,4-DIAMINOPHENYL)AZO)-4,6-DINITROPHENOL

(C. I. MORDANT BROWN 12)

13230 3-((2,4-DIAMINOPHENYL)AZO)-4-HYDROXY-5-NITROBENZENESULFONIC ACID

(C. I. MORDANT BROWN 30)

13225 * 3-((2,4-DIAMINOPHENYL)AZO)-4-HYDROXYBENZENESULFONIC ACID

(C. I. MORDANT BROWN 13)

31700 5-((4'-((2,4-DIAMINOPHENYL)AZO)-6(OR 7)-SULFO-1-NAPHTHYL)AZO)-4-BIPHENYLYL)AZO)SALICYLIC ACI
D
(C. I. DIRECT BROWN 24)

13220 4-((2,4-DIAMINOPHENYL)AZO)-BENZENESULFONIC ACID,SODIUM SALT

(C. I. DIRECT BROWN 191)

31710 5-((4'-((8-((2,4-DIAMONPHENYL)AZO)-1-HYDROXY-3,6-DISULFO-2-NAPHTHYL)AZO)-4-BIPHENYLYL)AZO)SA
LICYLIC ACID
(C. I. DIRECT BROWN 51)

23040 3,3'-((3,3'-DICHLORO(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(4-AMINO-,1-NAPHTHALENESULFONIC AC
ID
(C. I. DIRECT RED 61)

24380 6,6'-((3,3'-DIMETHOXY(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(4-AMINO-5-HYDROX-,1-NAPHTHALENES
ULFONIC ACID
(C. I. DIRECT BLUE 4)

24100 * 3,3'-((3,3'-DIMETHOXY(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(4-AMINO-, 1-NAPHTHALENESULFON
IC ACID
(C. I. DIRECT RED 7)

24410 * 6,6'-((3,3'-DIMETHOXY(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(4-AMINO-5- HYDROXY-,1,3-NAPHTH
ALENEDISULFONIC ACID
(C. I. DIRECT BLUE 1)

22610 3,3'-((3,3'-DIMETHOXY(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(4-HYDROXY-,1-NAPHTHALENESULFONIC
ACID
(C. I. DIRECT BLUE 6)

24400 * 3,3'-((3,3'-DIMETHOXY(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(5-AMINO-4-HYDROXY-2,7-NAPHTHALEN
EDISULFONIC ACID),TETRA SODIUM SALT
(C. I. DIRECT BLUE 15)

24340 3,3'((3,3'-DIMETHOXY(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(7-AMINO-4-HYDROXY)-2-NAPHTHALENES
ULFONIC ACID),DISODIUM SALT
(C. I. DIRECT BLUE 152)

23860 6,6'-((3,3'-DIMETHYL(1,1'-BIPHENYL)-4,4'-DIYL) BIS (AZO)) BIS(4-AMINO-5-HYDROXY-,1,3-NAPHTHA
LENEDISULFONIC ACID
(C. I. DIRECT BLUE 53)

23500 * 3,3'-((3,3'-DIMETHYL(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(4-AMINO-,1-NAPHTHALENSULFONIC ACI
D.
(C. I. DIRECT RED 2)

23650 * 3,3'-((3,3'-DIMETHYL(1,1'-BIPHENYL)-4,4'-DIYL)BIS(AZO))BIS(5-AMINO-4-HYDROXY-,2,F-NAPHTHALEN
ESULFONIC ACID
(C. I. DIRECT BLUE 14) NAPHTHALENESULFONIC ACID

46075 9-(4(DIMETHYLAMINO)PHENYL)-N,N-DIMETHYL-,3,6-ACRIDINEDIAMINE

(C.I. BASIC ORANGE 23)

11395 1-((2,4-DINITRO-O-RESORCINYL)AZO)-2-NAPHTHYLAMINE

(C. I. MORDANT GREEN 24)

10375 N-(2,4-DINITROPHENYL)-1,4-BENZENEDIAMINE

(C. I. DISPERSE YELLOW 9)

67100 5,10-DIONE,2-(1-AMINO-9,10-DIHYDRO-9,10-DIOXO-2-ANTHRACENYL)-ANTHRA(2,3-D)THIAZOLE

(C.I. VAT RED 20)

23550 -A DIRECT DYE

(NAPHTHAZURIN B)

61125 * -DISPERSE DYE (SEE PHOTO COPIES)
((4-(ACETYLAMINO)PH
ENYL)AMINO)AMINO-9,10-DIHYDRO-9,10-DIOXO-,ANTHRACENEDISULFONIC ACID
(C.I. ACID BLUE 23)

17185 4-HYDROXY-5-AMINO-6-((4-AMINO-2-NITROPHENYL)AZO)-2,7-NAPHTHALENEDISULFONIC,DISODIUM SALT

(C. I. ACID BLUE 6)

21030 * 4,4'((4-METHOPY-1,3-PHENYLENE)BIS(AZO))BIS(6-METHYL-1,3-BENZENEDIAMINE)

(C. I. BASIC BROWN 2)

21010 * 4,4'-((4-METHYL-1,3-PHENYLENE)BIS(AZO))BIS(6-METHYL-,1,3-BENZENEDIAMINE

(C. I. BASIC BROWN 4)

11160 * 2-METHYL-4-((2-METHYLPHENYL)AZO)-BENZENAMINE

(C. I. SOLVENT YELLOW 3)

11250 * 5-METHYL-4-((P-NITROPHENYL)AZO)-O-ANISIDINE

(C. I. DISPERSE RED 31)

11285 4-(1-NAPHTHYLAZO)-M-PHENYLENEDIAMINE

(C. I. SOLVENT BROWN 1)

11330 5-(1-NAPHTHYLAZO) TOLUENE-2,4-DIAMINE

(C. I. SOLVENT BROWN 2)

26030 4-((4-(1-NAPHTHYLAZO)-1-NAPHTHYL)AZO)-1-NAPHTHYLAMINE

(C. I. SOLVENT RED 29)

11360 4-(1-NAPHTHYLAZO)-1-NAPHTHYLAMINE

(C. I. SOLVENT BROWN 3)

11260 4-((P-NITROPHENYL)AZO)-2,5-DIMETHYL BENZENEAMINE

(C. I. DISPERSE BLUE 11)

11385 1-((P-NITROPHENYL)AZO)-2-NAPHTHYLAMINE

(C. I. SOLVENT RED 5)

11005 * 4-((4-NITROPHENYL)AZO)-BENZENAMINE

(C. I. DISPERSE ORANGE 3)

17055 -NOT IN C I BOOK

HYLSULFONANILIDE))AZO)-6-AMINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACID,SODIUM SALT 5-((4-NITRO-2-(N-E

(C. I. ACID BLUE 117)

31560 -NOT IN C. I. BOOK

(C. I. DIRECT BLACK 9)

19100 -NOT IN C.I. BOOK

(C. I. DIRECT ORANGE 84)

34139 -NOT IN C.I. BOOK

(C. I. DIRECT BLUE 186)

35750 (NOT IN C.I. BOOK)

(C.I. MORDANT BROWN 36)

36310 (NOT IN C.I. BOOK)

(C.I. DIRECT BROWN 149)

61670 (NOT IN C.I. BOOK) ,N'-(9,10-DIHYDRO-9
,10-DIOXO-1,4-ANTHRACENEDIYL)BIS(1-AMINO-9,10-DIHYDRO--9,10-DIOXO-2-ANTHRACENECARBO
(C.I. VAT RED 21)

52040 (NOT IN C.I. BOOK) 3-AMINO-7-(DIMETHYL
AMINO)-2-METHYL-,PHENOTHIAZIN-5-IUM
(C.I. BASIC BLUE 17)

67000 * OXAZOLE

(C.I. VAT RED 10)

11350 4-(PHENYLAZO)-1-NAPHTHYLAMINE

(C. I. SOLVENT YELLOW 4)

11380 1-(PHENYLAZO)-2-NAPTHYLAMINE

(C. I. SOLVENT YELLOW 5 OR C. I. FOOD YELLOW 10)

11000 * 4-(PHENYLAZO)-BENZENAMINE

(C. I. SOLVENT YELLOW 1 OR ANILINE YELLOW)

11270 * 4-(PHENYLAZO)-M-PHENYLENEDIAMINE

(C. I. BASIC ORANGE 2)

11270 * 4-(PHENYLAZO)-M-PHENYLENEDIAMINE

(C. I. SOLVENT ORANGE 3) OR (CHRYSOIDINE)

11320 * 5-(PHENYLAZO)TOLUENE-2,4-DIAMINE

(C. I. BASIC ORANGE 1)

35010 4,4'-(1,3-PHENYLENEBIS(AZO(4,6-DIAMINO-3,1-PHENYLENE)AZO))BIS,BENZENESULFONIC ACID

(C.I. DIRECT BROWN 44)

35005 * 4,4'-(1,3-PHENYLENEBIS(AZO(4,6-DIAMINO-3,1-PHENYLENE)AZO))BIS-,BENZENESULFONIC ACID

(C.I. DIRECT BROWN 44)

21000 * 4-4'-(1,3-PHENYLENEBIS(AZO))BIS-,1,3-BENZENEDIAMINE

(C. I. BASIC BROWN 1)

64505 1,4,5,8 TETRAAMINO ANTHRAQUINONE, METHYLATED

(C.I. DISPERSE BLUE 31)

64500 (,4,5,8-TETRAMINO-9,10-ANTHRACENEDIONE

C.I. DISPERSE BLUE1 OR C.I. SOLVENT BLUE 18)

11390 1-(O-TOLYLAZO)-2-NAPHTHYLAMINE

(C. I. SOLVENT YELLOW 6 OR C. I. FOOD YELLOW 11)

11160 4-M-TOLYLAZO-M-TOLIDINE

(C. I. AZOIC DIAZO COMPONENT 4)-(SEE C. I. 37210)

46020 N'N'2-TRIMETHYL-,3,6-ACRIDINEDIAMINE

(C.I. BASIC YELLOW 7)

46040 2,7,9-TRIMETHYL-,3,6-ACRIDINEDIAMINE

(C.I. BASIC YELLOW 9)

50040 N>,N>,2-TRIMETHYL-,3,7-PHENAZINEDIAMINE

(C.I. BASIC RED 6)

25380 * 5,5'-(UREYLENEBIS((2-SULFO-P-PHENYLENE)AZO))BIS(6-AMINO-4-HYDROXY-2-NAPHTHALENESULFONIC ACID)

(C. I. DIRECT RED 75)

29210 * 7-7'-UREYLENEBIS(3-((M-AMINOPHENYL)AZO)-4-HYDROXY-2-NAPHTHALENESULFONIC ACID)

(C. I. DIRECT RED 122)

SECONDARY AMINES

10525 (C. I. PIGMENT YELLOW 11)

10550 (C. I. DISPERSE ORANGE 15)

10380 (C. I. ACID BROWN 212)

10395* (C. I. ACID BROWN 1)

10410 (C. I. ACID BROWN 13)

13085 (C. I. ACID YELLOW 14)

13091* (C. I. ACID ORANGE 1)

13265* (C. I. MORDANT BROWN 49)

13295 (C. I. MORDANT BROWN 11)

13390* (C. I. ACID BLUE 92)

13470 (SUPRAMINE VIOLET R) - AN ACID DYE

14155*	(C. I. DIRECT GREEN 26)
14170*	(C. I. ACID YELLOW 65)
17500	(C. I. DIRECT VIOLET 8)
17510	(C. I. DIRECT VIOLET 56)
17515	(C. I. DIRECT VIOLET 55)
17520	(C. I. MORDANT BLACK 52)
17525	(C. I. MORDANT BLACK 66)
17550	(C. I. ACID BROWN 91)
17510	(C. I. DIRECT VIOLET 55)
17570	(C. I. ACID BROWN 89)
17580	(C. I. ACID BLACK 31)
17595	(C. I. ACID BROWN 88)
17620	(C. I. ACID BROWN 86)
17630	(C. I. DIRECT BROWN 30)
17640	(C. I. ACID BROWN 20)
17650	(C. I. MORDANT GREEN 34)
18058	(C. I. ACID BLUE 174)
22465	(C. I. DIRECT VIOLET 17)
22520	(C. I. DIRECT VIOLET 85)
22620	(C. I. DIRECT BLACK 15)
22625	(C. I. DIRECT BLUE 177)
22630	(C. I. DIRECT VIOLET 38)
22780	(C. I. DIRECT VIOLET 79)
22810	(C. I. DIRECT BLUE 93)
22930	(C. I. DIRECT VIOLET 25)
23155	(C. I. DIRECT BLUE 98)
24405	(C. I. DIRECT BLUE 23)
24415	(C. I. DIRECT BLUE 215)

24560 (C. I. DIRECT BLUE 167)

25355 (C. I. DIRECT VIOLET 61)

25375 (C. I. DIRECT RED 49)

25385 (C. I. DIRECT VIOLET 6)

25420 (C. I. DIRECT VIOLET 80)

25735 (C. I. ACID BLUE 85)

26040 (C. I. SOLVENT BLACK 4)

26361 (C. I. ACID BLUE 114)

26405 (C. I. ACID BLACK 21)

26410 (C. I. ACID BLUE 118)

26690 (C. I. ACID BLACK 26R)

27070 (C. I. ACID BLACK 26)

27075 (C. I. ACID BLACK 26A)

27850 (C. I. DIRECT VIOLET 41)

27855* (C. I. DIRECT VIOLET 7)

27860 (C. I. DIRECT VIOLET 26)

27865 (C. I. DIRECT VIOLET 57)

27880 (C. I. DIRECT VIOLET 31)

27890 (C. I. DIRECT BLUE 29)

27895 (C. I. DIRECT BLUE 145)

27900 (C. I. DIRECT VIOLET 40)

27910 (C. I. DIRECT VIOLET 11)

27915 (C. I. DIRECT VIOLET 55)

27940 (C. I. DIRECT BLUE 55)

27960 (C. I. DIRECT BLUE 54)

27980 (C. I. DIRECT BLUE 116)

28350 (C. I. DIRECT BLUE 149)

29105* (C. I. DIRECT VIOLET 14)

29110*	(C. I. DIRECT RED 149)
29115	(C. I. ACID BLUE 36)
29120*	(C. I. DIRECT VIOLET 66)
29125*	(C. I. DIRECT VIOLET 48)
29128	(C. I. DIRECT BLUE 184)
29130	(C. I. DIRECT BLUE 185)
31515	(C. I. DIRECT BROWN 166)
31545	(C. I. DIRECT BLACK 10)
31575	(C. I. DIRECT BLACK 2)
31580	(C. I. DIRECT BLACK 21)
31980	(C. I. DIRECT GREEN 36)
32055	(C. I. DIRECT BLUE 34)
33560	(C. I. DIRECT BLUE 163)
34205	(C. I. DIRECT BLUE 70)
34210	(C. I. DIRECT BLUE 69)
34220*	(C. I. DIRECT BLUE 75)
35435*	(C. I. DIRECT BLACK 22)
35460	(C. I. DIRECT BLUE 176)
35465	(C. I. DIRECT BLUE 175)
35770	(C. I. DIRECT BLUE 162)
35775	(C. I. DIRECT BLUE 159)
42130	(C. I. PIGMENT BLUE 12)
42150	(C. I. ACID BLUE 3A)
42655*	(C. I. ACID BLUE 90)
42690	(NEO VIOLET 5WS)
42750*	(C. I. ACID BLUE 110)
42760*	(C. I. SOLVENT BLUE 23)
42765	(C. I. ACID BLUE 119)

43525	(C. I. ACID VIOLET 15)
43540	(C. I. MORDANT VIOLET 23)
43545	(CHROMOGEN BLUE R)
43552	(C. I. MORDANT VIOLET 36)
43555	(C. I. MORDANT VIOLET 10)
44060	(C. I. ACID BLUE 8A)
45205	(C. I. ACID BLUE 19)
50235	(C. I. BASIC VIOLET 12)
50255	(METAPHENYLENE BLUE B,RB,BRR)
50305	(C. I. BASIC BLUE 14)
50306	(C. I. BASIC BLUE 13)
50325	(C. I. ACID VIOLET 50)
50335	(C. I. ACID BLUE 9A)
50400*	(C. I. SOLVENT BLUE 7)
50440	(C. I. OXIDATION BASE 1 OR C. I. PIGMENT BLACK 1)
51080	(C. I. MORDANT BLUE 35)
51120	(C. I. MORDANT BLUE 56)
51125	(C. I. MORDANT BLUE 59)
51130	(ULTRACYANINE B,R)
51165	(C. I. MORDANT VIOLET 58)
51305	(C. I. DIRECT BLUE 190)
52100	(C. I. VAT VIOLET 19)
56010	(C. I. VAT BROWN 24 OR C. I. VAT BROWN 34)
56011	(C. I. VAT GREEN 23)
56012	(C. I. VAT BROWN 37)
56015	(C. I. VAT GREEN 22)
56016	(C. I. VAT BROWN 21)
56050	(C. I. VAT RED 33)

56055	(C. I. ACID BLACK 47)
56065	(C. I. VAT RED 30)
60510	(C. I. DISPERSE RED 22)
61130	(C. I. ACID BLUE 150)
61135*	(C. I. ACID BLUE 127)
61590	(C. I. ACID GREEN 44)
61595	(C. I. ACID GREEN 3a)
61705*	(C. I. SOLVENT VIOLET 14)
62065	(SRA FAST BLUE FSI)
62080*	(C. I. SOLVENT BLUE 13)
62085*	(C. I. ACID BLUE 47)
62095	(C.I. ACID BLUE 49)
62100	(C.I. SOLVENT BLUE 12)
62135	(C.I. ACID BLUE 53)
62145	(C.I. ACID BLUE 51)
62155	(C.I. ACID BLUE 111)
62515	(C.I. ACID GREEN 37)
63615*	(C.I. MORDANT BLACK 13)
63620	(C.I. MORDANT BLACK 57)
64515*	(C.I. ACID BLUE 81)
65000	(C.I. ACID BROWN 26)
65005*	(C.I. ACID BLACK 48)
65008	(C.I. ACID BLACK 97)
65025	(C. I. VAT ORANGE 20)
65225	(C. I. VAT BLACK 29)
68210*	(C. I. SOLVENT RED 52)
68220	(C. I. ACID RED 85)
68500	(C. I. ACID VIOLET 39)

62125 * 4-((4-(ACETYLAMINO)PHENYL)AMINO)-1-AMINO-9,10-DIHYDRO-9,10-DIOXO-,2-ANTHRACENESULTONIC ACID

(C.I. ACID BLUE 40)

61125 * ((4-(ACETYLAMINO)PHENYL)AMINO)AMINO-9,10-DIHYDRO-9,10-DIOXO-, ANTHRACENEDISULFONIC ACID

(C. I. ACID BLUE 23)

62130 * 4-((4-(ACETYLMETHYLAMINO)PHENYL)AMINO)-1-AMINO-9,10-DIHYDRO-9,10-DIOXO-,2-ANTHRACENESULFONIC ACID

(C.I. ACID BLUE 41)

35420 -ACID DYE

(SILK PRINTING BLACK M)

42551 -ACID DYE

(AGALMA GREEN B)

64505 (ALIZARINE BRILLIANT SKY BLUE G)-ACID DYE

(C.I. DISPERSE BLUE 31)

62165 (ALIZARINE DIRECT VIOLET BL)-ACID DYE ((4-AMINO-3-(DODECY
LOXY)-9,10-DIHYDRO-9,10-DIOXO-1-ANTHRACENYL)AMINO)-,BENZENESULFONIC ACID
(C.I. ACID VIOLET 51)

50330 9-((4-AMINO-2-SULFOPHENYL)AMINO)-11-METHYL-7-PHENYL-5-(PHENYLAMINO)-4-SULFO-, BENZO(A)PHENAZ
INIUM
(C. I. ACID BLUE 61)

62105 * 2-((4-AMINO-3-BROMO-9,10-DIHYDRO-9,10-DIOXO-1-ANTHRACENYL)AMINO)-5-METHYL-,BENZENESULFONIC A
CID
(C.I. ACID BLUE 78)

42700 ((4-((4-AMINO-3-METHYLPHENYL)(4-((SULFO-2-NAPHTHALENYL)IMINO)-2,5-CYCLOHEXADIEN-1-YLIDENE)ME
THYL)PHENYL)AMINO)-,NAPHTHALENESULFONIC ACID
(C. I. DIRECT BLUE 41)

50230 3-((4-AMINO-3-SULFOPHENYL)AMINO)-7-(ETHYL((3-SULFOPHENYL)METHYL)AMINO)-5-(4-SULFOPHENYL)-,PH
ENAZINIUM
(C. I. ACID BLUE 1A)

35480 6-((2-AMINO-4-((2-HYDROXYETHYL)AMINO)PHENYL)AZO)-3-((4-((-((7-((2-AMINO-4-((2-HYDROXETHYL)AM
INO)PHENYL)AZO)-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO) PHENYL)AMINO)-3-SULFOPHENYL)A
(C. I. DIRECT BLACK 32)

62075 1-AMINO-4-((4-DODECYLSULFOPHENYL)AMINO)-9,10-DIHYDRO-9,10-DIOXO-,2-ANTHRACENESULFONIC ACID

(C. I. ACID BLUE 138)

62045 * 1-AMINO-4-(CYCLOHEXYLAMINO)-9,10-DIHYDRO-9,10-DIOXO-,2-ANTHRACENESULFONICACID

(C. I. ACID BLUE 62)

62050 1-AMINO-4-(CYCLOHEXYLAMINO)-9,10-DIHYDRO-9,10-DIOXO-2-ANTHRACENECARBOXAMIDE

(C. I. DISPERSE BLUE 6)

61105 * 1-AMINO-4-(METHYLAMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE VIOLET 4)

61110 1-AMINO-4-(PHENYLAMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE BLUE 19)

62085 * 2-((4-AMINO-9,10-DIHYDRO-3-METHYL-9,10-DIOXO-1-ANTHRACENYL)AMINO)-5-METHY
L-,BENZENESULFONIC ACID

62070 * 1-AMINO-9,10-DIHYDRO-4-((4-METHYL-2-SULFOPHENYL)AMINO)-9,10-DIOXO-,2-ANTHRACENESULFONIC ACID

(C. I. ACID BLUE 145)

62035 1-AMINO-9,10-DIHYDRO-4-(METHYLAMINO)-9,10-DIOXO-2-ANTHRACENECARBOXAMIDE

(C. I. DISPERSE BLUE 5)

62120 5-(((3-((4-AMINO-9,10-DIHYDRO-9,10-DIOXO-3-SULFO-1-ANTHRACENYL)AMINO)-4-METHOXYPHENYL)METHYL
)SULFONYL)-2-HYDROXY-,BENZOIC ACID
(C.I. MORDANT BLUE 48)

62055 * 1-AMINO-9,10-DIHYDRO-9,10-DIOXO-4-(PHENYLAMINO)-,2-ANTHRACENESULFONIC ACID

(C. I. ACID BLUE 25)

42755 AMINOMETHYL((4-((SULFOPHENYL)AMINO)PHENYL)(4-((SULFOPHENYL)IMINO)-2,5-CYCLOHEXADIEN-1-YLIDEN
E)METHYL)-,BENZENESULFONIC ACID
(C. I. ACID BLUE 22)

13390 * 4-(4-ANILINO-5-SULFO-1-NAPHTHYL)AZO)-5-HYDROXY-2,7-NAPHTHALENEDISULFONIC ACID

(C. I. ACID BLUE 92)

13065 * M-((P-ANILINOPHENYL)AZO)BENZENESULFONIC ACID

(C. I. ACID YELLOW 36)

61545 1,4-BIS((2-HYDROXYETHYL)AMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE BLUE 23)

56005 2,5-BIS((4-CHLOROPHENYL)AMINO)-2,5-CYCLOHEXADIENE-1,4-DIONE

(C. I. VAT YELLOW 5)

61565 * 1,4-BIS((4-METHYLPHENYL)AMINO)-9,10-ANTHRACENEDIONE

(C. I. SOLVENT GREEN 5)

65205 2,6-BIS((9,10-DIHYDRO-9,10-DIOXO-1-ANTHRACENYL)AMINO)-9,10-ANTHRACENEDIONE

(C. I. VAT RED 4A)

24555 2,2'-((4,4'-BIS(1-HYDROXY-6-((4-METHOXYPHENYL)AMINO)-3-SULFO-2-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-3,3'-DIYL)BIS(OXY)BIS-ACETIC ACID
(C. I. DIRECT BLUE 158)

42705 N-(4-((4-(BIS(2-HYDROXYETHYL)AMINO)-2-METHYLPHENYL)(4-((4-ETHYLPHENYL)AMINO)PHENYL)METHYLENE)-3-METHYL-2,5-CYCLOHEXADIEN-1-YLIDENE)-2-HYDROXY-N-(2-HYDROXYETHYL)-,ETHANAMINIUM
(C. I. BASIC BLUE 16)

42780 * ((4-(BIS(4-((SULFOPHONYL)AMINO)PHENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)AMINO)-,BENZENESULFONIC ACID
(C. I. ACID BLUE 93)

52030 3,7-BIS(ETHYLAMINO)-2,8-DIMETHYL-,PHENOTHIAZIN-5-IUM

(C. I. BASIC BLUE 24)

42675 N-(4-((4-(BUTYL(2-SULFOETHYL)AMINO)PHENYL)(4-((4-ETHOXYPHENYL)AMINO)PHENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)-N-(2-SULFOETHYL)-,1-BUTANAMINIU
(C. I. ACID BLUE 100)

41005 44'-CARBONIMIDOYLBIS(N,2-DIMETHYL-,BENZENAMINE

(C. I. BASIC YELLOW 3)

43550 5-((3-CARBOXY-5-METHYL-4-OXO-2,5-CYCLOHEXADIEN-1-YLIDENE)(4-((4-METHYLPHENYL)AMINO)PHENYL)METHYL)-2-HYDROXY-3-METHYL-BENZOIC ACID
(C. I. MORDANT VIOLET 11)

42140 * 4-((2-CHLOROPHENYL)(4-(ETHYLIMINO)-3-METHYL-2,5-CYCLOHEXADIEN-1-YLIDENE)METHYL)-N-ETHYL-2-METHYL-,BENZENAMINE
(C. I. BASIC BLUE 5 OR C. I. PIGMENT BLUE 3)

51300 * 6,13-DICHLORO-3,10-BIS(PHENYLAMINO)-2,9-TRIPHENODIOXAZINEDISULFONIC ACID

(C. I. DIRECT BLUE 106)

59051 3,8-DICHLORO-5,10-BIS(PHENYLAMINO)-,1,6-PYRENEDIOL

(C. I. SOLUBILISED VAT GREEN 21)

50310 9-(DIETHYLAMINO)-7-(2,6-DIMETHYL-3-SULFOPHENYL)-5-((4-(ETHYLAMINO)-5-METHYL-2-SULFOPHENYL)AMINO)-,BENZO(A)PHENAZINIUM
(C. I. ACID BLUE 121)

44085 N-(4-((4-(DIETHYLAMINO)PHENYL)(4-((4-METHYLPHENYL)AMINO)-1-NAPHTHALENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)-N-ETHYL-,ETHANAMINIUM
(C. I. BASIC BLUE 15)

42595 * N-(4-((4-(DIETHYLAMINO)PHENYL)(4-(ETHYLAMINO)-1-NAPHTHALENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)-N-ETHYL-,ETHANAMINIUM
(C. I. BASIC BLUE 7 OR C. I. PIGMENT BLUE 1)

42050 N-(4-((4-(DIETHYLAMINO)PHENYL)(5-((2,4-DINITROPHENYL)AMINO)-2,4-DISULFOPHENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)-N-ETHYL-,ETHANAMINIUM
(C. I. ACID GREEN 9)

63315 9,10-DIHYDRO-1,5-DIHYDROXY-4,8-BIS(METHYLAMINO)-9,10-DIOXO-,2-ANTHRACENESULFONIC ACID
(C.I. ACID BLUE 55)

68215 * 2-((2,7-DIHYDRO-3-METHYL-2,7-DIOXO-3H-DIBENZ(F,IJ)ISOQUINOLIN-6-YL)AMINO))-5-METHYL-,BENZENESULFONIC ACID
(C. I. ACID RED 80)

68205 4-((2,7-DIHYDRO-3-METHYL-2,7-DIOXO-3H-DIBENZ(F,IJ)ISOQUINOLIN-6-YL)AMINO)-,1,3-BENZENEDISULFONIC ACID
(C. I. ACID RED 82)

60730 * 2-((9,10-DIHYDRO-4-HYDROXY-9,10-DIOXO-1-ANTHRACENYL)AMINO)-5-METHYL-,BENZENESULFONIC ACID
(C. I. ACID VIOLET 43)

62550 2,2'-((9,10-DIHYDRO-5-HYDROXY-9,10-DIOXO-1,4-ANTHRACENEDIYL)DIIMINO)BIS(5-METHYL-BENZENESULFONIC ACID)
(C.I. ACID GREEN 3A)

61585 * 3,5-((9,10-DIHYDRO-9,10-DIOXO-1,4-ANTHRACENEDIYL)DIIMINO)BIS(2,4,6-TRIMETHYL-,BENZENESULFONIC ACID
(C. I. ACID BLUE 80)

61580 2,2'-((9,10-DIHYDRO-9,10-DIOXO-1,4-ANTHRACENEDIYL)DIIMINO)BIS(5-BUTYL-,BENZENESULFONIC ACID
(C. I. ACID GREEN 27)

61570 * 2,2'-((9,10-DIHYDRO-9,10-DIOXO-1,4-ANTHRACENEDIYL)DIIMINO)BIS(5-METHYL-,BENZENESULFONIC ACID
(C. I. ACID GREEN 25)

61710 * 2,2'-((9,10-DIHYDRO-9,10-DIOXO-1,5-ANTHRACENEDIYL)DIIMINO)BIS(5-METHYL-,BENZENESULFONIC ACID
(C. I. ACID VIOLET 34)

61800 * 2,2'-((9,10-DIHYDRO-9,10-DIOXO-1,5-ANTHRACENEDIYL)DIIMINO)BIS(5-METHYL-,BENZENESULFONIC ACID
(C. I. ACID VIOLET 38)

62560 * 3-((9,10-DIHYDRO-9,10-DIOXO-1-ANTHRACENYL)AMINO)-ANTHRA(2,1,9-MNA)NAPHTH(2,3-H)ACRIDINE-5,10,15(16H)-TRIONE
(C.I. ACID GREEN 41)

65020 N-(4-((9,10-DIHYDRO-9,10-DIOXO-2-ANTHRACENYL)AMINO)-9,10-DIHYDRO-9,10-DIOXO-1-ANTHRACENYL)-BENZAMIDE
(C. I. VAT VIOLET 16)

63305 1,5-DIHYDROXY-4,8-BIS(METHYLAMINO)-9,10-ANTHRACENEDIONE
(C.I. DISPERSE BLUE 26)

62500 * 1,4-DIHYDROXY-5,8-BIS((2-HYDROXYETHYL)AMINO)-9,10-ANTHRACENDIONE

(C.I. DISPERSE BLUE 7)

27905 * 3-((4-((2,4-DIMETHYL-6-SULFOPHENYL)AZO)-2-METHOXY-5-METHYLPHENYL)AZO)-4-HYDROXY-7-(PHENYLAMINO)-,2-NAPHTHALENESULFONIC ACID
(C. I. DIRECT VIOLET 51)

51190 9-(DIMETHYLAMINO)-5-((4-(DIMETHYLAMINO)PHENYL)AMINO)-,BENZO(A)PHENOXAZIN-7-IUM

(C. I. BASIC BLUE 10)

44040 * N-(4-((4-(DIMETHYLAMINO)PHENYL)(4-(ETHYLAMINO)-1-NAPHTHALENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)-N-METHYL-,METHANAMINIUM
(C. I. BASIC BLUE 11 OR C. I. PIGMENT BLUE 10 AND 11.)

44045 * N-(4-((4-(DIMETHYLAMINO)PHENYL)(4-(PHENYLAMINO)-1-NAPHTHALENYL)METHYL)-2,5-CYCLOHEXADIEN-1-YLIDENE)-N-METHYL-,METHANAMINIUM
(C. I. BASIC BLUE 26 OR C. I. PIGMENT BLUE 2)

10345 * P-(2,4-DINITROANILINO)-PHENOL

(C. I. DISPERSE YELLOW 1)

13100 P-((P-(2,4-DINITROANILINO)PHENYL)AZO)BENZENESULFONIC ACID

(C. I. ACID YELLOW 6)

10340 2,4-DINITRODIPHENYLAMINE

(C. I. DISPERSE YELLOW 14)

10375 N-(2,4-DINITROPHENYL)-1,4-BENZENEDIAMINE

(C. I. DISPERSE YELLOW 9)

10385 5-((2,4-DINITROPHENYL)AMINO)-2-(PHENYLAMINO)-BENZENESULFONIC ACID

(C. I. ACID ORANGE 3)

27970 2-(4-(2-(4-((3-ETHOXY-4-((1-HYDROXY-6-(PHENYLAMINO)-3-SULFO-2-NAPHTHALENYL)AZO)-7-SULFO-(-NAPHTHALENYL)AZO)-2-SULFOPHENYL)ETHENYL)-3-SULFOPHENYL)-,2H-NAPHTHO(1,2-D)THIAZOLE-5-
(C. I. DIRECT GREEN 34)

44510 2-ETHOXY-5-((4-((4-((4-ETHOXY-3-SULFOPHENYL)AMINO)-2,5-CYCLOHEXADIEN-1-YLIDENE)(1-METHYL-2-PHENYL-1H-INDOL-3-YL)METHYL)PHENYL)AMINO)-,BENZENESULFONIC ACID
(C. I. ACID BLUE 123)

42660 * N-(4-((4-((4-ETHOXYPHENYL)AMINO)PHENYL)(4-(ETHYL((3-SULFOPHENYL)METHYL)AMINO)PHENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)-N-ETHYL-3-SULFO-,BENZENEMETHANAMINIUM
(C. I. ACID BLUE 83)

26050 N-ETHYL-1-((4-(PHENYLAZO)PHENYL)AZO)-2-NAPHTHALENAMINE

(C. I. SOLVENT RED 19)

42740 N-ETHYL-N-(4-((4-(ETHYL((3-SULFOPHENYL)METHYL)AMINO)-2-METHYLPHENYL)(4-(PHENYLAMINO) PHENYL) METHYLENE)-3-METHYL-2,5-CYCLOHEXADIEN-1-YLIDENE)-3-SULFO-, BENZENEMETHANAMINIUM (C. I. ACID BLUE 109)

50250 3-(ETHYLAMINO)-2,8-DIMETHYL-7-(METHYLAMINO)-5-PHENYL-,PHENAZINIUM

(C. I. BASIC RED 10)

45220 4-(6-(ETHYLAMINO)-3-(ETHYLIMINO)-2,7-DIMETHYL-3H-XANTHEN-9-YL)-,1,3-BENZENEDISULFONIC ACID

(C. I. ACID RED 50)

45160 * 2-(6-(ETHYLAMINO)-3-(ETHYLIMINO)-2,7-DIMETHYL-3H-XANTHEN-9-YL)-,BENZOIC ACID

(C. I. BASIC RED 1 OR C. I. PIGMENT RED 81)

45150 2-(6-(ETHYLAMINO)-3-(ETHYLIMINO)-3H-XANTHEN-9-YL)-,BENZOIC ACID

(C. I. BASIC RED 8 OR C. I. PIGMENT RED 82)

42135 4-((4-(ETHYLAMINO)-3-METHYLPHENYL)(4-(ETHYLIMINO)-3-METHYL-2,5-CYCLOHEXADIEN-1-YLIDENE)METHYL)-,1,3-BENZENEDISULFONIC ACID
(C. I. ACID BLUE 147)

27885 * 4-HYDROXY-3-((2-METHOXY-5-METHYL-4-((4-SULFOPHENYL)AZO)PHENYL)AZO)-7-(PHENYLAMINO)-,2-NAPHTHALENESULFONIC ACID
(C. I. DIRECT VIOLET 9)

24185 4-HYDROXY-3-((4'-((1-HYDROXY-6-(PHENYLAMINO)-3-SULFO-2-NAPHTHALENYL)AZO)-3,3'-DIMETHOXY(1,1'-BIPHENYL)-4-YL)AZO)-,1-NAPHTHALENESULFONIC ACID
(C. I. DIRECT BLUE 168)

17610 4-HYDROXY-3-(2-METHOXY-5-NITROPHENYL)AZO)-6-(PHENYLAMINO)-,2-NAPHITHALENESULFONIC ACID

(C. I. ACID BROWN 16)

60725 * 1-HYDROXY-4-((4-METHYLPHENYL)AMINO)-9,10-ANTHRACENEDIONE

(C. I. SOLVENT VIOLET 13)

60715 1-HYDROXY-4-(METHYLAMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE BLUE 22)

27925 * 4-HYDROXY-5-((4-((1-HYDROXY-6-(PHENYLAMINO)-3-SULFO-2-NAPHTHALENYL)AZO)-5-METHOXY-2-METHYLPHENYL)AZO)-,2,7-NAPHTHALENEDISULFONIC ACID
(C. I. DIRECT BLUE 67)

34215 * 4-HYDROXY-5-((4-((4-((1-HYDROXY-6-(PHENYLAMINO)-3-SULFO-2-NAPHTHALENYL)AZO)-6-SULFO-1-NAPHTHALENYL)AZO)-1-NAPHTHALENYL)AZO)-,2,7-NAPHITHALENEDISULFONIC ACID
(C. I. DIRECT BLUE 81)

22345 2-HYDROXY-5-(4'-(1-HYDROXY-7-(PHENYLAMINO)-3-SULFO-2-NAPHTHALENYL)AZO)(1,1'-BIPHENYL)-4-YL)AZO)-,BENZOIC ACID
(C. I. DIRECT BROWN 59)

13405 4-HYDROXY-5-(5-SULFO-4-P-TOLUIDINO-1-NAPHTHYL)AZO)-2,7-NAPHTHALENEDISULFONIC ACID)

(C. I. ACID BLUE 69)

34200 2-((4-((4-((1-HYDROXY-6-(PHENYLAMINO)-3-SULFO-2-NAPHTHALENYL)AZO)-1-NAPHTHALENYL)AZO)-6-SULF
O-1-NAPHTHALENYL)AZO)-,1,4-BENZENEDISULFONIC ACID
(C. I. DIRECT BLUE 78)

34230 2-((4-((4-((1-HYDROXY-6-(PHENYLAMINO)-3-SULFO-2-NAPHTHALENYL)AZO)-3-ETHOXY-7-SULFO-1-NAPHTHA
LENYL)AZO)-1-NAPHTHALENYL)AZO)-,1,4-BENZENEDISULFONIC ACID
(C. I. DIRECT BLUE 83)

61510 1-((2-(2-HYDROXYETHOXY)ETHYL)AMINO)-4-(METHYLAMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE BLUE 54)

61505 * 1-((2-HYDROXYETHYL)AMINO)-4-(METHYLAMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE BLUE 5)

60507 1-((2-HYDROXYETHYL)AMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE RED 3)

29100 * 7,7'-IMINOBIS(4-HYDROXY-3-(PHENYLAZO)-,2-NAPHTHALENESULFONIC ACID

(C. I. DIRECT RED 31)

65010 N,N'-(IMINOBIS(9,10-DIHYDRO-9,10-DIOXO-4,1-ANTHRACENEDIYL))BIS-BENZAMIDE

(C.I. VAT BLACK 28)

50320 9-((3-METHOXYPHENYL)AMINO)-7-PHENYL-5-(PHENYLAMINO)-4,10-DISULFO-BENZO(x)PHENAZINIUM HYDROXI
DE,INNER SALT
(C. I. ACID BLUE 102)

10415 2,2'-(2-METHYL-3,6-DIOXO-1,4-CYCLOHEXADIENE-1,4-DIYL)BIS(IMINO(2-METHYL-4,1-PHENYLENE)IMINO)
)BIS (5-NITRO-BENZENESULFONIC ACID
(C. I. ACID BROWN 103)

50055 2-METHYL-3-(METHYLAMINO)-5-PHENYL-7-(PHENYLAMINO)-,PHENAZINIUM

(C. I. BASIC VIOLET 6)

42800 2-METHYL-4-((4-((4-((3-METHYLPHENYL)AMINO)PHENYL)(4-((3-METHYLPHENYL)IMINO)-2,5-CYCLOHEXADIE
N-1-YLIDENE)METHYL)PHENYL)AMINO)-BENZENESULFONIC ACID
(C. I. PIGMENT BLUE 56)

61520 1-(METHYLAMINO)-4-((3-METHYLPHENYL)AMINO)-9,10-ANTHRACENEDIONE

(C. I. SOLVENT BLUE 63)

61525 * 1-(METHYLAMINO)-4-((4-METHYLPHENYL)AMINO)-9,10-ANTHRACENEDIONE

(C. I. SOLVENT BLUE 11)

61530 * 1-(METHYLAMINO)-4-((4-METHYLPHENYL)AMINO)-9,10-ANTHRACENEDIONE

(C. I. SOLVENT BLUE 11)

61515 1-(METHYLAMINO)-4-(PHENYLAMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE BLUE 24)

60505 * 1-(METHYLAMINO)-9,10-ANTHRACENEDIONE

(C. I. DISPERSE RED 9)

45190 2-(6-((2-METHYLPHENYL)AMINO)-3-((2-METHYL-4-SULFOPHENYL)IMINO)-3H-XANTHEN-9-YL)-,BENZOIC ACID

(C. I. ACID VIOLET 9)

26400 8-((4-METHYLPHENYL)AMINO)-5-((4-((3-SULFOPHENYL)AZO)-1-NAPHTHALENYL)AZO)-,1-NAPHTHALENESULFONIC ACID

(C. I. ACID BLUE 120)

10378 * 3-NITRO-N-PHENYL-4-(PHENYLAMINO)-BENZENESULFONAMIDE

(C. I. DISPERSE YELLOW 42)

11080 4-((4-NITROPHENYL)AZO)-N-PHENYL-BENZENAMINE

(C. I. DISPERSE ORANGE 1)

61555 * NOT IN C. I. BOOK 1,4-BIS(PENTYLAMINO)-9,10-ANTHRACENEDIONE

(C. I. SOLVENT BLUE 14)

68200 NOT IN C. I. BOOK 4-((2,7-DIHYDRO-3-METHYL-2,7-DIOXO-3H-DIBENZ(F,IJ)ISOQUINOLIN-6-YL)AMINO)-,BENZENESULFONIC ACID

(C. I. ACID RED 81)

61500 * NOT IN C. I. BOOK NOT IN C. I. BOOK 1,4-BIS(METHYLAMINO)-9,10-ANT

(C. I. DISPERSE BLUE 14)

50315 7-PHENYL-5,9-BIS(PHENYLAMINO)-8,10-DISULFO-,BENZO(A) PHENAZINIUM

(C. I. ACID BLUE 59)

45186 2-(6-(PHENYLAMINO)-3-((4-SULFOPHENYL)IMINO)-3H-XANTHEN-9-YL)-,BENZOIC ACID

(C. I. ACID VIOLET 30)

26370 8-(PHENYLAMINO)-5-((4-((5-SULFO-1-NAPHTHALENYL)AZO)-1-NAPHTHALENYL)AZO)-,1-NAPHTHALENESULFONIC ACID

(C. I. ACID BLACK 24)

26380 8-(PHENYLAMINO)-5-((4-(PHENYLAZO)-7-SULFO-1-NAPHTHALENYL)AZO)-,1-NAPHTHALENE-SULFONIC ACID

(C. I. ACID BLUE 116)

13080 * 4-((4-(PHENYLAMINO)PHENYL)AZO)-,BENZENESULFONIC ACID

(C. I. ACID ORANGE 5) OR (ORANGE IV)

42770 ((4-((4-(PHENYLIMINO)-2,5-CYCLOHEXADIEN-1-YLIDENE)(4-((SULFOPHENYL)AMINO)PHENYL)METHYL)PHENYL)AMINO)-,BENZENESULFONIC ACID

(C. I. ACID BLUE 48)

50085 7-PHENYLSULFO-5-((4-SULFOPHENYL)AMINO)-BENZO(A)PHENAZINIUM HYDROXIDE,INNER SALT

(C. I. ACID RED 101)

TERTIARY AMINES

10380 (C. I. ACID BROWN 212)

11040 (C. I. DISPERSE RED 41)

11135 (C. I. DISPERSE RED 58)

11152* (C. I. DISPERSE BROWN 1)

13150* (C. I. ACID ORANGE 50)

16595 (C. I. ACID BLUE 4)

18775 (C. I. ACID GREEN 2)

22340 (C. I. DIRECT BROWN 58)

30260 (C. I. ACID BLACK 69) OR (C. I. DIRECT BLACK 41)

42005 (C. I. MORDANT GREEN 13)

42015 (C. I. MORDANT BLUE 52)

42038 (C. I. ACID GREEN 11)

42105 (C. I. ACID GREEN 15)

42625 (C. I. ACID BLUE 17)

43505 (C. I. MORDANT RED 29)

43510 (C. I. MORDANT VIOLET 6)

43515 (C. I. MORDANT VIOLET 8)

43560 (C. I. MORDANT VIOLET 15)

44015 (C. I. MORDANT VIOLET 18)

44025* (C. I. ACID GREEN 16)

44035 (C. I. ACID BLUE 108)

44055 (C. I. ACID VIOLET 24)

44060 (C. I. ACID BLUE 8R)

48013* (C. I. BASIC VIOLET 16)

50210 (C. I. BASIC VIOLET 8)

50305 (C. I. BASIC BLUE 14)

50306 (C. I. BASIC BLUE 15)

50335 (C. I. ACID BLUE 9R)

51025 (C. I. MORDANT VIOLET 35)

51080 (C. I. MORDANT BLUE 35)

51120 (C. I. MORDANT BLUE 56 OR DELPHINE BLUE)

51125 (C. I. MORDANT BLUE 59)

51215 (C. I. BASIC BLACK 7)

52055 (C. I. MORDANT BLUE 51)

64505 (C. I. DISPERSE BLUE 31)

51045 1-(AMINOCARBONYL)-7-(DIMETHYLAMINO)-3,8-DIHYDROXY-,PHENOXAZIN-5-IUM

(C. I. MORDANT BLUE 45 OR GALLAMINE BLUE)

11035 4-((4-AMINO-2-CHLOROPHENYL)AZO)-N,N-DIMETHYL-BENZENAMINE

(C. I. DISPERSE BLACK 7)

11220 2,2'-((4-((4-AMINO-2-METHOXYPHENYL)AZO)-M-TOLYL)IMINO)DIETHANOL

(C. I. DISPERSE BLACK 9)

50230 3-((4-AMINO-3-SULFOPHENYL)AMINO)-7-(ETHYL((3-SULFOPHENYL)METHYL)AMINO)-5-(4-SULFOPHENYL)-,PH
ENAZINIUM
(C. I. ACID BLUE 1R)

46020 3-AMINO-6-(DIMETHYLAMINO)-2-METHYL-ACRIDINE

(C. I. BASIC YELLOW 7)

46075 3-AMINO-6-(DIMETHYLAMINO)-9-(P-(DIMETHYLAMINO)PHENYL)-ACRIDINE

(C. I. BASIC ORANGE 23)

52040 3-AMINO-7-(DIMETHYLAMINO)-2-METHYL-,PHENOTHIAZIN-5-IUM

(C. I. BASIC BLUE 17)

50040 3-AMINO-7-(DIMETHYLAMINO)-2-METHYLPHENAZINE

(C. I. BASIC RED 5)

50205 3-AMINO-7-(DIMETHYLAMINO)-5-PHENYLPHENAZINIUMCHLORIDE

(C. I. BASIC VIOLET 5)

51180 5-AMINO-9-(DIETHYLAMINO)-BENZO(A)PHENOXAZIN-7-IUM

(C. I. BASIC BLUE 12) OR (NILE BLUE)

51050 1-(AMINOCARBONYL)-7-(DIETHYLAMINO)-3,4-DIHYDROXY-,PHENOXAZIN-5-IUM

(C. I. MORDANT BLUE 14)

11025 4-((4-AMINOPHENYL)AZO)-N,N-DIMETHYL-BENZENAMINE

(C. I. DISPERSE BLACK 3)

44045 * (4-(A-(4-ANILINO-1-NAPTHYL)-P-(DIMETHYLAMINO)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)DIMETH
YLAMMONIUM CHLORIDE
(C. I. BASIC BLUE 26 OR C. I. PIGMENT BLUE 2)

42740 (4-(A-(P-ANILINOPHENYL)-4-(ETHYL(M-SULFOBENZYL)AMINO)-2-METHYLBENZYLIDENE)-3-METHYL-2,5-CYCL
OHEXADIEN-1-YLIDENE)
(C. I. ACID BLUE 109)

42080 * BENZYL(4-(A-(P-(BENZYLETHYLAMINO)PHENYL)-2,4-DISULFOBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE
)
(C. I. ACID BLUE 7)

42052 BENZYL(4-(A-(P-(BENZYLETHYLAMINO)PHENYL)-5-HYDROXY-2,4-DISULFOBENZYLIDENE-2,5-CYCLOHEXADIEN-
1-YLIDENE)
(C. I. ACID BLUE 5)

42576 N-(4-((4-(BIS((3-SULFOPHENYL)METHYL)AMINO)PHENYL)(4-(DIMETHYLAMINO)PHENYL)METHYLENE)-2,5-CYC
LOHEXADIENE-1-YLIDENE)-N,N-DIMETHYL METHANAMINIUM HYDROXIDE
(C. I. ACID BLUE 75)

42735 (4-(4-(BIS(2-HYDROXYETHL)AMINO)-2-METHYL-A-(P-(P-PHENETIDINO)PHENYL)BENZYLIDENE)-3-METHYL-2,
5-CYCLOHEXADIEN-1-YLIDENE)BIS(2-HYDROXYETHL) AMMONIUM CHLORIDE
(C. I. BASIC BLUE 18)

13058 * 4-((P-(BIS(2-HYDROXYETHYL)AMINO)PHENYL)AZO)-BENZOIC ACID

(C. I. PIGMENT RED 100)

51004 * 3,7-BIS(DIETHYLAMINO)-1-METHOXY-,PHENOXAZIN-5-IUM

(C. I. BASIC BLUE 4)

52015 * 3,7-BIS(DIMETHYLAMINO)-,PHENOTHIAZIN-5-IUM

(C. I. BASIC BLUE 9 OR C. I. SOLVENT BLUE 8 OR METHYLENE BLUE)

46070 3,6-BIS(DIMETHYLAMINO)-2,7-DIMETHYL-9-PHENYL-ACRIDINE

(C. I. BASIC ORANGE 18)

52020 3,7-BIS(DIMETHYLAMINO)-4-NITRO-,PHENOTHIAZIN-5-IUM

(C. I. BASIC GREEN 5 OR METHYLENE GREEN)

46005 * 3,6-BIS(DIMETHYLAMINO)-ACRIDINE

(C. I. BASIC ORANGE 14)

46010 3,6-BIS(DIMETHYLAMINO-10-METHYL ACRIDINIUM METHYL SULFATE

(C. I. BASIC ORANGE 19)

42580 (4-(P-(BIS(M-SULFOBENZYL)AMINO)-A-(P-(DIMETHYLAMINO)PHENYL)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)
(C. I. ACID VIOLET 21)

42600 * (4-(BIS(P-(DIETHYLAMINO)PHENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)DIETHYLAMMONIUM CHLORIDE
(C. I. BASIC VIOLET 4) OR (C. I. PIGMENT BLUE 14)

42555 * (4-(BIS(P-(DIMETHYLAMINO)PHENYL)METHYLENE)-2,5-CYCLOHEXADIEN-1-YLIDENE) DIMETHYAMMONIUM CHLORIDE
(C. I. BASIC VIOLET 3)

11200 2-(4-((2-BROMO-4,6-DINITROPHENYL)AZO)-N-BUTYL-M-TOLUIDINO)ETHANOL

(C. I. DISPERSE VIOLET 24)

48000 * P-(BUTYL(2-CHLOROETHYL)AMINO)-A-CYANOCINNAMIC ACID

(C. I. DISPERSE YELLOW 31)

11120 2-(BUTYL(4-((2,4-DINITROPHENYL)AZO)PHENYL)AMINO)-ETHANOL

(C. I. DISPERSE VIOLET 12)

42675 BUTYL(4-(P-(BUTYL(2-SULFOETHYL)AMINO)-A-(P-(P-PHENETIDINO)PHENYLBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)
(C. I. ACID BLUE 100)

11195 2-(N-BUTYL-4-((2,4-DINITROPHENYL)AZO)-M-TOLUIDINO)ETHANOL

(C. I. DISPERSE VIOLET 13)

43570 5-(A-(3-CARBOXY-5-METHYL-4-OXO-2,5-CYCLOHEXADIEN-1-YLIDENE)-2-CHLORO-4- (DIETHYLAMINO)BENZYL)-3-METHYLSALICYLIC ACID
(C. I. MORDANT VIOLET 26)

43565 5-(A-(3-CARBOXY-5-METHYL-4-OXO-2,5-CYCLOHEXADIEN-1-YLIDENE)-P-(DIMETHYLAMINO)BENZYL)-3-METHYLSALICYLIC ACID
(C. I. MORDANT VIOLET 1)

51030 1-CARBOXY-7-(DIMETHYLAMINO)-3,4-DIHYDROXY-,PHENOXAZIN-5-IUM

(C. I. MORDANT BLUE 10 OR GALLOCYANINE)

45305 9-(O-CARBOXYPHENYL)-6-(DIETHYLAMINO)-3-OXO-3H-XANTHENE-2-CARBOXYLIC ACID

(C. I. MORDANT RED 15)

45175 * (9-(O-CARBOXYPHENYL)-6-(DIETHYLAMINO)-3H-XANTHEN-3-YLIDEN)DIETHYLAMMONIUM

(C. I. BASIC VIOLET 11 OR C. I. PIGMENT VIOLET 2)

45170 * (9-(O-CARBOXYPHENYL)-6-(DIETHYLAMINO)-3H-XANTHEN-3-YLIDENE)DIETHYLAMMONIUM

(C. I. BASIC VIOLET 10 OR C. I. PIGMENT VIOLET 1)

11150 * 2,2'-((3-CHLORO-4-((4-NITROPHENYL)AZO)PHENYL)IMINO)BIS-ETHANOL

(C. I. DISPERSE RED 7)

11215 * 2,2'-((4-((2-CHLORO-4-NITROPHENYL)AZO)-M-TOLYL)IMINO)DIETHANOL

(C. I. DISPERSE RED 5)

11085 * (2-(P-((2-CHLORO-4-NITROPHENYL)AZO)-N-ETHYLANILINO)ETHYL) TRIMETHYLAMMONIUM

(C. I. BASIC RED 18)

11115 * 2-((4-((2-CHLORO-4-NITROPHENYL)AZO)PHENYL)ETHYLAMINO)-ETHANOL

(C. I. DISPERSE RED 13)

48020 * 2-(4-((2-CHLOROETHYL)ETHYLAMINO)-2-METHYLSTYRYL)-1,3,3-TRIMETHYL-3H- INDOLIUM

(C. I. BASIC VIOLET 7)

48015 * 2-(P-((2-CHLOROETHYL)METHYLAMINO)STYRYL)-1,3,3-TRIMETHYL-3H-INDOLIUM

(C. I. BASIC RED 13)

42170 * (4-(A-(O-CHLOROPHENYL)-4-(ETHYL(M-SULFOBENZYL)AMINO)-2-METHYLBENZYLIDENE -3-METHYL-2,5-CYCLO HEXADIEN-1-YLIDENE)

(C. I. ACID GREEN 22)

42025 (4-(A-(O-CHLOROPHENYL)-P-(DIMETHYLAMINO)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)DIMETHYLAMM ONIUM CHLORIDE

(C. I. BASIC BLUE 1 OR C. I. PIGMENT BLUE 9)

42100 * (4-(A-(O-CHLOROPHENYL)-P-(ETHYL(M-SULFOBENZYL)AMINO)BENZYLIDENE)-2,5- CYCLOHEXADIEN-1-YLI DENE)

(C. I. ACID GREEN 9)

45050 (9-(2-CORBOXYETHYL)-6-(DIMETHYLAMINO)-3H-XANTHEN-3-YLIDENE)DIMETHYL AMMONIUM CHLORIDE

(C. I. BASIC RED 11)

48005 A-CYANO-P-(N-METHYL-P-PHENETIDINO)-CINNAMIC ACID

(C. I. DISPERSE YELLOW 61)-CELLITON FAST YELLOW 3G

42120 DIBENZYL(4-(4-(P-(DIBENZYLAMINO)PHENYL)-2,4-DISULFOBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID BLUE 103)

45180 * (9-(2,5-DICARBOXY-4-HYDROXYPHENYL)-6-(DIETHYLAMINO)-3H-XANTHEN-3-YLIDENE)DIETHYLAMMONIUM

(C. I. MORDANT RED 27)

11190 2-((4-((2,6-DICHLORO-4-NITROPHENYL)AZO)-3-METHYLPHENYL)METHYLAMINO)-ETHANOL

(C. I. DISPERSE RED 32)

11100 * 2-((4-((2,6-DICHLORO-4-NITROPHENYL)AZO)PHENYL)METHYLAMINO)-ETHANOL

(C. I. DISPERSE ORANGE 5)

11021 * N,N-DIETHYL-P-(PHENYLAZO)ANILINE

(C. I. SOLVENT YELLOW 56)

50310 9,(DIETHYLAMINE)-7-(2,6-DIMETHYL-3-SULFOPHENYL)-5-((4-(ETHYLAMINO)-5-METHYL-2-SULFOPHENYL)AMINO)-,BENZO(A)PHENAZINIUM

(C. I. ACID BLUE 121)

52025 3-(DIETHYLAMINO)-7-(DIMETHYLAMINO)-,PHENOTHIAZIN-5-IUM

(C. I. BASIC BLUE 25)

11825 3-(DIETHYLAMINO)-7-(P-HYDROXYPHENYL)AZO)-5-PHENYLPHENAZINUM CHLORIDE

(C. I. BASIC BLACK 2)

45100 * (6-(DIETHYLAMINO)-9-(2,4-DISULFOPHENYL)-3H-XANTHEN-3-YLIDENE)DIETHYL-AMMONIUM

(C. I. ACID RED 52)

42595 * (4-(P-(DIETHYLAMINO)-A-(4-(ETHYLAMINO)-1-NAPHTHYL)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)DIMETHYLAMMONIUM CHLORIDE

(C. I. BASIC BLUE 7 OR C. I. PIGMENT BLUE 1)

42645 * (4-(4-(DIETHYLAMINO)-A-(P-(ETHYL(M-SULFOBENZYL)AMINO)PHENYL)-2-METHYLBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID BLUE 15)

42040 * (4-(P-(DIETHYLAMINO)-A-PHENYLBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE) DIETHYLAMMONIUM SULFATE

(C. I. BASIC GREEN 1 OR C. I. PIGMENT GREEN 1)

44085 N-(4-((4-(DIETHYLAMINO)PHENYL)(4-((4-METHYLPHENYL)AMINO)-1-NAPHTHALANYL)METHYLENE)-2,5-CYCLOHEXADIENE-1-YLIDENE)-N-ETHYL-ETHANAMINIUM CHLORIDE

(C. I. BASIC BLUE 15)

49705 N-(P-(DIETHYLAMINO)PHENYL)-1-(2H)NAPHTHALENONE-4-((4-(DIETHYLAMINO)PHENYL)IMINO)-3,4-DIHYDRO
-1,4-NAPHTHOQUINONE IMINE
(C. I. SOLVENT BLUE 22)

42055 (4-(A-(P-(DIETHYLAMINO)PHENYL)-2,4-DIMETHYL-3,5-DISULFOBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLID
ENE)
(C. I. ACID GREEN 7 OR C. I. SOLVENT GREEN 15)

42085 * (4-(A-(P-(DIETHYLAMINO)PHENYL)-2,4-DISULFOBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID BLUE 1 OR C. I. FOOD BLUE 3)

42730 (4-(A-(P-(DIETHYLAMINO)PHENYL)-4-(ETHYL(2-SULFOETHYL)AMINO)-2,5-DIMETHYLBENZYLIDENE)-3-METHY
L-2,5-CYCLOHEXADIEN-1-YLIDENE)
(C. I. ACID BLUE 24)

42735 * (4-(A-(P-(DIETHYLAMINO)PHENYL)-4-(ETHYL(M-SULFOBENZYL)AMINO)-2-METHYLBENZYLIDENE)-3-METHYL-2
,5-CYCLOHEXADIEN-1-YLIDENE)
(C. I. ACID BLUE 104)

42050 (4-(A-(P-(DIETHYLAMINO)PHENYL)-5-(2,4-DINITROANILINE)-2,4-DISULFOBENZYLIDENE)-2,5-CYCLOHEXAD
IEN-1-YLIDENE)
(C. I. ACID GREEN 8)

42051 (4-(A-(P-(DIETHYLAMINO)PHENYL)-5-HYDROXY-2,4-DISULFOBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE
)
(C. I. ACID BLUE 3)

42650 * (4-(A-(P-(DIETHYLAMINO)PHENYL)-P-(ETHYL(M-SULFOBENZYL)AMINO)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1
-YLIDENE)
(C. I. ACID VIOLET 17)

11020 * N,N-DIMETHYL-4-(PHENYLAZO)-BENZENAMINE

(C. I. SOLVENT YELLOW 2)

13020 2-((4-(DIMETHYLAMINE)PHENYL)AZO)-BENZOIC ACID

(C. I. ACID RED 2)

51175 * 9-(DIMETHYLAMINO)-,BENZO(A)PHENOXAZIN-7-IUM

(C. I. BASIC BLUE 6 OR MELDOLA'S BLUE)

42557 N-(4-((4-(DIMETHYLAMINO)-2-METHYLPHENYL)(4-(DIMETHYLAMINO)PHENYL)METHYLENE)-2,5-CYCLOHEXADIE
NE)-N-METHYL METHANAMINIUM CHLORIDE
(C. I. BASIC VIOLET 23)

51040 7-(DIMETHYLAMINO)-3,4-DIHYDROXY-1-METHOXYCARBONYL-PHENOXAZINE-5-IUM CHLORIDE

(C. I. MORDANT VIOLET 54)

45300 O-(6-(DIMETHYLAMINO)-3-OXO-2-SULFO-3H-XANTHEN-9-YL)-BENZOIC ACID

(C. I. MORDANT RED 77)

51190 9-(DIMETHYLAMINO)-5-((4-(DIMETHYLAMINO)PHENYL)AMINO)-,BENZO(A)PHENOXAZIN-7-IUM

(C. I. BASIC BLUE 10)

44090 * (4-(P-(DIMETHYLAMINO)-A-(2-HYDROXY-3,6-DISULFO-1-NAPHTHYL)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID GREEN 50 OR C. I. FOOD GREEN 4)

44040 * (4-(P-(DIMETHYLAMINO)-A-(4-(ETHYLAMINO)-1-NAPHTHYL)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE) DIMETHYLAMMONIUM CHLORIDE

(C. I. BASIC BLUE 11 OR C. I. PIGMENT BLUE 10 AND 11)

42563 (4-(P-(DIMETHYLAMINO)-A-(4-(N-METHYLANILINO)-1-NAPHTHYL)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)DIMETHYLAMMONIUM CHLORIDE

(C. I. BASIC BLUE 8)

42561 * (4-(4-(DIMETHYLAMINO)-A-(P-(METHYL(M-SULFOBENZYL)AMINO)PHENYL)-3-SULFOBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID BLUE 34)

43525 N-(4-((4-(DIMETHYLAMINO)PHENYL)(2-ETHOXY-4-((4-METHYLSULFOPHENYL)AMINO)-5-SULFOPHENYL)METHYLENE)-2,5-CYCLOHEXADIENE-1-YLIDENE)-N-METHYL METHANAMINIUM HYDROXIDE

(C. I. ACID VIOLET 15)

49005 * 2-(P-(DIMETHYLAMINO)PHENYL)-3,6-DIMETHYL-BENZOTHIAZOLIUM

(C. I. BASIC YELLOW 1 OR C. I. PIGMENT YELLOW 18)

42571 (4-(A-(P-(DIMETHYLAMINO)PHENYL)-4-(ETHYL(M-SULFOBENZYL)AMINO)-2-SULFOBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID BLUE 13)

42640 * (4-(A-(P-(DIMETHYLAMINO)PHENYL)-P-(ETHYL(M-SULFOBENZYL)AMINO)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID VIOLET 49 OR C. I. FOOD VIOLET 2)

13025 * P-((P-(DIMETHYLAMINO)PHENYL)AZO)-BENZENSULFONIC ACID

(C. I. ACID ORANGE 52 OR ORANGE III)

11118 3-(ETHYL(4-((4-NITROPHENYL)AZO)PHENYL)AMINO)-1,2-PROPANEDIOL

(C. I. DISPERSE RED 2)

11110 * 2-(ETHYL(4-((4-NITROPHENYL)AZO)PHENYL)AMINO)-ETHANOL

(C. I. DISPERSE RED 1)

42655 * ETHYL(4-(4-ETHYL(M-SULFOBENZYL)AMINO)-2-METHYL-A-(P-(P-PHENETIDINO)PHENYL)BENZYLIDENE)-3-METHYL-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID BLUE 90)

42053 * ETHYL(4-(A-(P-(ETHYL(M-SULFOBENZYL)AMINO)PHENYL)-4-HYDROXY-2-SULFOBENZYLIDENE-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. FOOD GREEN 3)

42090 * ETHYL(4-(P-(ETHYL(M-SULFOBENZYL)AMINO)-A-(O-SULFOPHENYL)BENZYLIDENE)2,5-CYCLOHEXADIEN-1-YLID
ENE)
(C. I. ACID BLUE 9 OR C. I. FOOD BLUE 2 OR C. I. PIGMENT BLUE 24

42660 * ETHYL(4-(P-(ETHYL(M-SULFOBENZYL)AMINO)-A-(P-(P-PHENETIDINO)PHENYL)BENZYLIDENE-2,5-CYCLOHEXAD
IEN-1-YLIDENE)
(C. I. ACID BLUE 83)

42095 * ETHYL(4-(P-(ETHYL(M-SULFOBENZYL)AMINO)-A-(P-SULFOPHENYL)BENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLI
DENE)
(C. I. ACID GREEN 5 OR C. I. FOOD GREEN 2)

42085 * ETHYL(4-(P-(ETHYL(M-SULFOBENZYL)AMINO)-A-PHENYLBENZYLIDENE)-2,5-CYCLOHEXADIEN-1-YLIDENE)

(C. I. ACID GREEN 3 OR C. I. FOOD GREEN 1)

11225 2,2'-((4-((2-HYDROXY-4-NITROPHENYL)AZO)-M-TOLYL)IMINO)DIETHANOL

(C. I. DISPERSE RED 16)

41000 * 4,4'-IMIDOCARBONYLBIS(N,N-DIMETHYLAMINE)

(C. I. BASIC YELLOW 2)

41000 * 4,4'-IMIDOCARBONYLBIS(N,N-DIMETHYLANILINE)

(C. I. SOLVENT YELLOW 34)

11210 * 2,2'-((4-((P-NITROPHENYL)AZO)-M-TOLYL)IMINO)DIETHANOL

(C. I. DISPERSE RED 17)

11130 2,2'-((4-((4-NITROPHENYL)AZO)PHENYL)IMINO)BIS-ETHANOL

(C. I. DISPERSE RED 19)

42000 * TRIS(3,4-DIHYDRO-3,4-DIOXO-1-NAPHTHALENESULFONIC ACID 3-OXIMATO)-IRON

(C. I. BASIC GREEN 4 OR C. I. PIGMENT GREEN 4)

6-((2-AMINO-4-((2-HYDROXYETHYL)AMINO)PHENYL)AZO)-3-((4-((4-((7-((2-AMINO-4-((2-HYDROXYETHYL)
AMINO)PHENYL)AZO)-1-HYDROXY-3-SULFO-2-NAPHTHALENYL)AZO)PHENYL)AMINO)-3-SULPHOPHENYL
TRISODIUM SALT

61205 1-AMINO-9,10-DIHYDRO-9,10-DIOXO-4-((3-((2-(SULFOOXY)ETHYL)SULFONYL)PHENYL)AMINO)-2-ANTHRACEN
ESULFONIC ACID,DISODIUM SALT (NOT IN C.I. BOOK)
1-AMINO-4-((3-((4-CHLORO-6-((3-SULFOPHENYL)AMINO)-1,3,5-TRIAZIN-

42655 * (NOT IN C. I. BOOK) N-(4-((4-((4-ETHOXY
PHENYL)AMINO)PHENYL)(4-(ETHYL((3-SULFOPHENYL)METHYL)AMINO)-2-METHYLPHENYL)METHYLENE
HYL-3-SULFO-,BENZENEMETHANAMINIUM

INDUSTRY CATEGORY *PESTICIDES*

PRIMARY AMINES

3-AMINO-2,5-DICHLOROBENZOIC ACID

3-AMINO-2,5-DICHLOROBENZOIC ACID,AMMONIUM SALT

4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID

2,6-DICHLORO-4-NITROANILINE

N''',N'''-DIETHYL-2,4-DINITRO-6-TRIFLUOROMETHYL-1,3-PHENYLENEDIAMINE

SECONDARY AMINES

4-CHLORO-5-(METHYLAMINO)-2-(A,A,A-TRIFLURO-M-TOLYL-3(2H)-PYRIDAZINONE)

M-(((DIMETHYLAMINO)METHYLENE[illegible]INO) PHENYL METHYLCARBAMATE

DIPHENYLAMINE

N-SEC-BUTYL-4-TERT-BUTYL-2,6-DINITROANILINE

TERTIARY AMINES

2,6-BIS(DIMETHYLAMINOMETHYL) CYCLOHEXANONE

N,N-BIS(PHOSPHONOMETHYL) GLYCINE

N,N-BIS(PHOSPHONOMETHYL) GLYCINE,ISOPROPYLAMINE SALT

N,BUTYL-N-ETHYL-A,A,A-TRIFLUORO-2,6-DINITRO-P-TOLUIDINE

N''',N'''-DIETHYL-2,4-DINITRO-6-TRIFLUOROMETHYL-1,3-PHENYLENEDIAMINE

M-(((DIMETHYLAMINO)METHYLENE)AMINO) PHENYL METHYLCARBAMATE

4-DIMETHYLAMINO-3,5-XYLYLMETHYLCARBAMATE

2,6-DINITRO-N,N-DIPROPYL-P-TOLUIDINE

2,6-DINITRO-N,N-DIPROPYLCUMIDENE

4-(METHYLSULFONYL-2,6-DINITRO)-N,N-DIPROPYLANILINE

POLY(OXYETHYLENE(DIMETHYLIMINO) ETHYLENE-(DIMETHYLIMINO) ETHYLENEDICHLORIDE)

A,A,A-TRIFLUORO-2,6-DINITRO-N,N-DIPROPYL-P-TOLUIDINE

INDUSTRY CATEGORY *PLASTICIZERS*

THIS INDUSTRY CATEGORY CONTAINS NO AMINO COMPOUNDS PER THE ESTABLISHED DEFINITION.

INDUSTRY CATEGORY *PLASTICS AND RESINS*

(SEE ELASTOMERS CATEGORY)

INDUSTRY CATEGORY *RUBBER PROCESSING CHEMICALS*

PRIMARY AMINES
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BIS(P-AMINOCYCLOHEXYL) METHANE CARBAMATE

CUMENE DIAMINE,58% AND N-PHENYLENEDIAMINE,42%

DI-P-METHOXYDIPHENYLAMINE,25%,DIPHENYL-P-PHENYLENEDIAMINE,25% AND PHENYL-B-NAPHTHYLAMINE,50%

4,4'-METHYLENEDIANILINE

N-(1-METHYLHEPTYL)-N'-PHENYL-P-PHENYLENEDIAMINE

NITROSO-N-PHENYL-P-PHENYLENEDIAMINE

SECONDARY AMINES
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ALKYL, ARYL P-PHENYLENE DIAMINE

ALKYLATED DIPHENYLAMINE

P-ANILINOPHENOL

N,N'-BIS(ISOPROPYL) P-PHENYLENEDIAMINE

N,N'-BIS(1-ETHYL-3-METHYLPENTYL) P-PHENYLENEDIAMINE

N,N'-BIS(1-METHYLHEPTYL) P-PHENYLENEDIAMINE

N,N'-BIS(1,4 DIMETHYLPENTYL) P-PHENYLENEDIAMINE

P,P'-DIACETYLDIPHENYLAMINE

DIARYL AND ALKYL,ARYL-P-PHENYLENEDIAMINE,BLENDED

DIARYL-P-PHENYLENEDIAMINE,HINDERED

DIARYL-P-PHENYLENEDIAMINE,MIXED

DIBENZYLAMINE

N,N'-DICYCLOHEXYL-P-PHENYLENEDIAMINE

N-(1,4-DIMETHYLAMYL-N'-PHENYL-P-PHENYLENEDIAMINE)

N-(1,3-DIMETHYLBUTYL-N'-PHENYL-P-PHENYLENEDIAMINE)

N,N'-DIPHENYL-P-PHENYLENEDIAMINE

DIPHENYL-P-PHENYLENEDIAMINE,35% AND PHENYL-B-NAPHTHYLAMINE,65%

N,N'-DIPHENYL-1,3-PROPYLENEDIAMINE

N,N'-DIPHENYLETHYLENEDIAMINE

P-ISOPROPOXYDIAPHENYLAMINE

N-ISOPROPYL-N'-PHENYL-P-PHENYLENEDIAMINE

DI-P-METHOXYDIPHENYLAMINE,25%,DIPHENYL-P-PHENYLENEDIAMINE,25% AND PHENYL-B-NAPHTHYLAMINE,50%

N,N'-DI-2-NAPHTHYL-P-PHENYLENEDIAMINE

N-PHENYL-N'-CYCLOHEXYL-P-PHENYLENEDIAMINE

N-PHENYL-1-NAPHTHYLAMINE

N-PHENYL-1-NAPHTHYLAMINE,50% (AND DIARYL-P-PHENYLENEDIAMINE)

N-PHENYL-2-NAPHTHYLAMINE

N-SEC-BUTYL-N'-PHENYL-P-PHENYLENEDIAMINE

N,N'-DI-SEC-BUTYL-P-PHENYLENEDIAMINE

P-(P-TOLUENESULFONYLAMIDO) DIPHENYLAMINE

TERTIARY AMINES
-------- ------

ALKYL,ARYL-P-PHENYLENEDIAMINES

ALKYLATED DIPHENYLAMINE

DIARYLARYLENEDIAMINES,MIXED

ONYLATED DIETHYLDIPHENYLAMINE

OCTYLDIPHENYLAMINE

OCTYLDIPHENYLAMINE MIXTURE (MONO,NONYL,AND DI)

OCTYLDIPHENYLAMINE,ALKYLATED

INDUSTRY CATEGORY *SURFACE ACTIVE AGENTS*

PRIMARY AMINES

1-(3-(2-AMINOETHYL) NAPTH-1-YL)-2-(8 HEPTADECENYL)-2-IMIDAZOLINE

N-(AMINOETHYL)-N-(HYDROXYETHYL) FATTY ACID AMIDES

1-(2-AMINOETHYL)-1,2-DISTEARYLIMIDAZOLINE

1-(2-AMINOETHYL)-2-(MIXED ALKYL)-2-IMIDAZOLINE

1-(2-AMINOETHYL)-2-HEPTADECYL-2-IMIDAZOLINE

1-(2-AMINOETHYL)-2-NOR(TALL OIL ALKYL)-2-IMIDAZOLINE

ARACHIDYL-BEHENYL AMINE

N-(ARACHIDYL-BEHENYL)-1,3 PROPYLENEDIAMINE

(COCONUT OIL ALKYL) AMINE

(COCONUT OIL ALKYL) DIAMINE

N-(COCONUT OIL ALKYL)-1,3-PROPYLENEDIAMINE

N-DODECYLAMINE

N-DODECYLDIETHYLENETRIAMINE

N-HEXADECYLAMINE

(HYDROGENATED TALLOW ALKYL) AMINE

LIGNIN AMINES

MIXED (DODECYL,TETRADECYL) AMINE

N-(MIXED ALKYL) POLYETHYLENEPOLYAMINE

(MIXED) ALKYL AMINE

(MIXED) TERT-ALKYL AMINE

MYRISTYLAMINE

N-OCTADECYLAMINE

N-OCTYLAMINE

N-OLEYL-1,3-PROPYLENEDIAMINE

OLEYLAMINE

N-PHENYLSTEARYL-TRIMETHYLENEDIAMINE

PHENYLSTEARYLAMINE

N-N-(PROPYLAMINO) TALLOW AMINE

ROSIN AMINE

(SOYBEAN OIL ALKYL) AMINE

(SOYBEAN OIL ALKYL) DIAMINE

N-(SOYBEAN-OIL ALKYL)-1,3-PROPYLENEDIAMINE

(TALL OIL FATTY ALKYL) AMINE

(TALL OIL FATTY ALKYL)-1,3-PROPYLENEDIAMINE

(TALLOW ALKYL) AMINE

(TALLOW ALKYL) DIAMINE

N-(TALLOW ALKYL) DIPROPYLENETRIAMINE

N-(TALLOW ALKYL)-1,3-PROPYLENEDIAMINE

TERT-OCTYLAMINE

SECONDARY AMINES

1-(2-AMINOETHYL)-2-NOR(TALL OIL ALKYL)-2-IMIDAZOLINE

N-(ARACHIDYL-BEHENYL)-1,3-PROPYLENEDIAMINE

N-(2-(CARBOXYMETHYLAMINO)ETHYL)-N-(2-HYDROXYETHYL)-COCONUT OIL AMIDE,SODIUM SALT

DI (COCONUT OIL ALKYL) AMINE

3-((COCONUT OIL ALKYL) AMINO) BUTYRIC ACID AND SODIUM SALT

N-(COCONUT OIL ALKYL)-B-ALANINE,PARTIAL SODIUM SALT

N-(COCONUT OIL ALKYL)-B-AMINOPROPIONIC ACID AND SODIUM SALT

N-(COCONUT OIL ALKYL)-2-AMINOBUTYRIC ACID AND SODIUM SALT

N-(DODECYL AND TETRADECYL)-B-AMINOPROPIONIC ACID AND TRIETHANOLAMINE SALTS

N-DODECYL-B-AMINOPROPIONIC ACID

N-DODECYLDIETHYLENETRIAMINE

DI-(HYDROGENATED ARACHIDYL/BEHENYL AMINE)

DI-(HYDROGENATED TALLOW) AMINE

DI-ISODECYLAMINE

N-(MIXED ALKYL) POLYETHYLENEPOLYAMINE

N-OLEYL-1,3-PROPYLENEDIAMINE

N-PHENYLSTEARYL-TRIMETHYLENEDIAMINE

N-N-(PROPYLAMINO) TALLOW AMINE

DI-(SOYBEAN OIL ALKYL) AMINE

N-(SOYBEAN OIL ALKYL)-1,3-PROPYLENEDIAMINE

N-(TALL OIL FATTY ALKYL)-1,3-PROPYLENEDIAMINE

N-(TALLOW ALKYL) DIPROPYLENETRIAMINE

N-(TALLOW ALKYL)-1,3-PROPYLENEDIAMINE

TERTIARY AMINES

ALKYL BIS (2-HYDROXYETHYL) AMINE

ANILINE,ETHOXYLATED

BIS (ARACHIDYL-BEHENYL) METHYLAMINE

N-(2-COCONUT OIL ACYL AMIDOETHYL)-N-(2-HYDROXYETHYL) GLYCINE,SODIUM SALT

N-(COCONUT OIL ACYL)-N-METHYLTAURINE,SODIUM SALT

(COCONUT OIL ALKYL) AMINE,ETHOXYLATED

(COCONUT OIL ALKYL) AMINE,PROPOXYLATED

(COCONUT OIL ALKYL) BIS(2-HYDROXYETHYL)AMINE

(COCONUT OIL ALKYL) DIMETHYLAMINE

DECYL DIMETHYLAMINE

N,N-DIMETHYL (MIXED ALKYL) AMINE

N,N-DIMETHYLOCTYLAMINE

N,N-DIMETHYLTRIDECYLAMINE

N-DODECYL DIMETHYLAMINE

N-DODECYL-B-AMINODIPROPIONIC ACID,PARTIAL AND DISODIUM SALTS

N-DODECYL-3-AMINODIPROPIONIC ACID,PARTIAL SODIUM SALT

N-DODECYL-B-IMINODIPROPIONIC ACID

ETHYLENEDIAMINE,ETHOXYLATED AND PROPOXYLATED

N-HEXADECYL DIMETHYLAMINE

(HYDROGENATED TALLOW ALKYL) AMINE ETHOXYLATED

(HYDROGENATED TALLOW ALKYL) DIMETHYLAMINE

N-(2-HYDROXYETHYL)-N-(2-STEARAMIDOETHYL) GLYCINE,SODIUM SALT

N-(2 HYDROXYETHYL)-N-(2-TAURAMIDOETHYL)-B-ALANINE,SODIUM SALT

N-(2-HYDROXYETHYL)-N,N',N'-TRIS(2-HYDROXYPROPYL) ETHYLENEDIAMINE

N-METHYLBIS (COCONUT OIL ALKYL) AMINE

N-METHYLBIS (HYDROGENATED TALLOW ALKYL) AMINE

N-METHYLBIS (OCTADECYL) AMINE

(MIXED ALKYL) POLY(OXYETHYLENE) AMINE

MIXED OCYCLIC PRIMARY AMINES,ETHOXYLATED AND SULFATED,SODIUM SALT

(MIXED) ALKYL AMINE,ETHOXYLATED

N-OCTADECYL BIS (2-HYDROXYETHYL) AMINE

N-OCTADECYL DIMETHYLAMINE

N-OCTADECYLAMINE,ETHOXYLATED

OLEYL DIMETHYLAMINE

OLEYLAMINE,ETHOXYLATED

PHENYLSTEARYLAMINE,ETHOXYLATED

POLYETHYLENEPOLYAMINE,ALKOXYLATED

ROSIN AMINE,ETHOXYLATED

(SOYBEAN OIL ALKYL) AMINE,ETHOXYLATED

(SOYBEAN OIL ALKYL) DIMETHYLAMINE

(TALLOW ALKYL) AMINE,ETHOXYLATED

(TALLOW ALKYL) BIS (2-HYDROXYETHYL) AMINE

(TALLOW ALKYL) DIMETHYLAMINE

N-(TALLOW ALKYL)-B-IMINODIPROPIONIC ACID,DISODIUM SALT

N-(TALLOW ALKYL)-1,3-PROPYLENEDIAMINE,ETHOXYLATED

(TERT-ALKYL) PRIMARY AMINES,ETHOXYLATED

N-TETRADECYL DIMETHYLAMINE

N,N,N',N'-TETRAKIS (2-HYDROXYETHYL) ETHYLENEDIAMINE

N,N,N',N'-TETRAKIS (2-HYDROXYETHYL) ETHYLENEDIAMINE PROPOXYLATED AND ETHOXYLATED

N,N,N',N'-TETRAKIS (2-HYDROXYPROPYL) ETHYLENEDIAMINE,PROPOXYLATED AND ETHOXYLATED

M-TOLUIDINE,ETHOXYLATED

TRI (HYDROGENATED TALLOW ALKYL) AMINE

TRI (N-DODICYL) AMINE

TRI (N-OCTYL) AMINE

TRIETHANOLAMINE,ETHOXYLATED

INDUSTRY CATEGORY *TAR AND TAR CRUDES*

THIS INDUSTRY CATEGORY CONTAINS NO AMINO COMPOUNDS PER THE ESTABLISHED DEFINITION.

APPENDIX B

SUMMARY OF AMINES PRODUCTION

	'35	'40	'45	'50	'60	'70	'75	'77
Cyclohexylamine								
Monsanto Chemical Co.	x	x	x			x		x

	'35	'40	'45	'50	'60	'70	'75	'77
Benzidine								
E.I. duPont de Nemours & Co., Inc.	x	x						
J.T. Baker Chemical Co.	x	x	x					
S.N. Cummings Chemical Co.	x							
National Aniline & Chemical Co.	x	x	x					
Amecco Chemicals, Inc.	x	x	x					
Eastman Kodak Co.	x	x	x					
Empire City Dye Products		x	x					
Fine Organics, Inc.			x					
Lewis, Paul, Laboratories, Inc.			x					
Dianisidine								
DuPont	x	x						

	'35	'40	'45	'50	'60	'70	'75	'77
Dibutylamine								
DuPont	x	x						
Commercial Solvents Corp.	x	x	x					
Eastman Kodak Co.	x	x						
Diamylamine								
The Sharples Solvents Corp.	x	x	x					

	'35	'40	'45	'50	'60	'70	'75	'77
Diethanolamine								
Carbide & Carbon Chemicals Corp.	x	x	x	x	x	x		
Dow			x	x	x	x		
Cole Labs				x				
Retort Pharmaceuticals				x				
Diethylamine								
Amecco Chemicals, Inc.	x	x						
Eastman Kodak Co.	x	x						
Dow Chemical Co.		x						
Retort Pharmaceuticals				x				

	'35	'40	'45	'50	'60	'70	'75	'77
Diethylaniline								
DuPont	x	x						
Dow	x	x	x	x		x		
Eastman Kodak	x	x						
Diisopropanolamine								
Carbide & Carbon Chemicals Corp.				x		x		

	'35	'40	'45	'50	'60	'70	'75	'77
Diisopropylamine								
Commercial Solvents Corp.				x		x		
Dimethylamine								
DuPont	x	x				x		
Commercial Solvents Corp.	x	x	x	x		x		
Amecco Chemicals, Inc.	x	x						
Eastman Kodak	x	x						
Rohm & Haas			x	x		x		

	'35	'40	'45	'50	'60	'70	'75	'77
Dimethylaniline								
DuPont	x							
Dow	x	x		x				
Calco Chemical Co.	x	x		x		x		
J.T. Baker Chemical Co.	x	x		x		x		
National Aniline & Chemical Co., Inc.	x	x		x		x		
Eastman Kodak	x							
Retort Pharmaceuticals		x		x				
Ciba Co., Inc.		x		x				
Diphenylamine								
DuPont	x	x	x	x		x		
J.T. Baker Chemical Co.	x	x	x	x		x		
Eastman Kodak	x	x						

	'35	'40	'45	'50	'60	'70	'75	'77
Ethylamine								
Amecco Chemicals, Inc.	x	x						

	'35	'40	'45	'50	'60	'70	'75	'77
Ethanolamines (Mono)								
Carbide & Carbon Chemicals Corp.	x	x	x			x		
Dow			x			x		
Retort Pharmaceuticals			x					
Republic Chemical Corp.			x			x		
Hexamethylene diamine (Hexamethylenamine) (Methenamine)								

	'35	'40	'45	'50	'60	'70	'75	'77
Triethanolamine								
The Beacon Co.	x	x	x	x				
Advance Solvents & Chemical Corp.	x	x	x	x				
Carbide & Carbon Chemicals Corp.	x	x	x	x		x		
Gylco Products Co., Inc.	x	x	x					
Dow Chemical Co.			x	x		x		
Retort Pharmaceuticals			x	x				
Republic Chemical			x	x		x		
Shepard Chemical Co.			x	x				
Conray				x				
Phillip Bros. Chemicals				x		x		
Trimethylamine								
DuPont	x					x		
Commercial Solvents	x	x	x	x		x		

	'35	'40	'45	'50	'60	'70	'75	'77
Xylidines								
DuPont	x	x						
National Aniline & Chemical Co.	x	x	x			x		
Calco		x						
Ciba		x						

	'35	'40	'45	'50	'60	'70	'75	'77
Methylamines								
Commercial Solvents	x	x	x			x		
Amecco Chemicals, Inc.	x	x						
Chas. Lennig & Co., Inc. (MDT)	x	x	x					
Rohm & Haas Co., Inc. (MDT)	x	x	x			x		
Naphthylamine (β-)								
DuPont	x							
J.T. Baker	x	x	x					
National Aniline & Chemical Co.	x	x	x			x		

	'35	'40	'45	'50	'60	'70	'75	'77
o-Chloroaniline (Orthochloraniline)								
Monsanto Chemical Co.	x	x	x			x		

	'35	'40	'45	'50	'60	'70	'75	'77
p(Amino phenol) (Para amino phenol)								
DuPont	x							
Calco Chemical Co.	x							
Dehls & Stein (B)	x							
Zinsser & Co., Inc.	x							
Eastman Kodak	x							

	'35	'40	'45	'50	'60	'70	'75	'77
p-Nitroaniline (Paranitroaniline)								
Mallinckrodt Chemical Works	x	x	x					
Monsanto Chemical Co.	x	x	x					
Calco Chemical Co., Inc.	x	x	x			x		
Sherwin-Williams Co.	x	x	x			x		
Alex C. Fergusson Co. (A)	x	x	x					
DuPont		x						
Ciba			x					

	'35	'40	'45	'50	'60	'70	'75	'77
Toluidine								
DuPont	x					x		
Calco Chemical Co., Inc.	x	x	x					
National Aniline & Chemical Co.	x	x	x			x		
Sherwin-Williams Co.	x	x	x			x		
Pennsylvania Coal Products Co.	x	x				x		
Ciba Co., Inc.			x			x		
Heyden Chemical Corp.			x					
Uhlich, Paul, & Co., Inc.			x			x		
Tolidine								
DuPont	x	x						
LaMotte Chemical Products Co.	x	x						
Transatlantic Chemical Corp.	x	x						
Glogan & Co.		x						

	'35	'40	'45	'50	'60	'70	'75	'77
Tributylamine								
DuPont	x							
Commercial Solvents	x							
Toluene-2,4-diamine (Tolylenediamine)								
DuPont	x							

APPENDIX C

EPIDEMIOLOGICAL ANALYSIS FOR POINT SOURCES

An emissions stream which is shown to contain "toxic" substances by chemical analysis or bioassay is only potentially toxic; under actual exposure conditions, it may or may not be toxic to members of the exposed population. Although chemical analysis and bioassay testing is extremely important tools in the detection of potentially toxic emissions, some method of determining which emissions streams or industries emit substances actually toxic to humans is also necessary. Epidemiological analysis can provide such a method.

In the course of an initial assessment of the primary Cu, Pb and Zn smelting industry, PEDCo developed a form of investigative retrospective epidemiological analysis particularly well suited for determining which if any adverse human health effects are associated with a specific industry or process. Analysis methodology developed in the epidemiological investigation of the primary Cu, Pb and Zn smelting industry should be applicable to many United States chemical process industries. Furthermore, since the method requires only existing mortality data, any industry or process can be analyzed by the method once the locations and characteristics of the sites or processes are obtained. The discussion in this section is relevant to using the epidemiological analysis scheme as an indicator of whether the manufacturer and/or use of commercially significant industrial amines provides a negative health impact on humans.

The basis strategy of the analysis scheme is to generate mortality profiles for counties containing industry sites or processes for this type of approach rests with the fact that a stationary emissions source can be considered a point emissions source within a given county. Thus, if emissions from a stationary source were producing adverse health effects, the county containing the facility would be expected to bear the largest adverse effect as compared to its surrounding counties. (Assuming the contiguous counties do not have a similar kind of manufacturing facility). In essense, a mortality profile provides a broad overview of the mortality characteristics associated with similar set of stationary sources (industry) by simultaneously examining many disease specific mortality parameters for each facility-containing county and a group of surrounding counties. The basic unit of anlaysis for this scheme is an emissions source containing county, and a group of surrounding counties.

Mortality parameters for this basic analysis unit can be compared in several different ways. Qualitatively, the emissions source containing county mortality parameters can be ranked in relation to those of all surrounding counties (normalized ranking). These rankings can then be converted to disease specific precentile mortality rankings for emissions source containing versus all surrounding counties. Output from this type of comparison allows the determination of associations between elevated disease specific mortality and emissions sources to be made without regard to the magnitude of the mortality elevations. Quantitatively, either the ratio (relative risk) or difference (attributable risk) between mortality parameters in emissions source containing counties and their respective group of all surrounding counties can be computed. Outputs from this type

of comparison allow the magnitude of any elevated disease specific mortality associated with emissions sources to be taken into consideration. Specific details on the methods for calculating these factors are described later in this section.

Data Base Inputs - The development of the epidemiological analysis scheme required (3) data base inputs:

(a) Contiguous county codes

(b) Male/female/total populations per county

(c) Disease mortality rates per county

The Worldwide Geographical Location Codes identifies over 3000 counties in the United States each by a 5 digit code; the first two digits represent a state code and the last 3 correspond to a county code. All the U.S. counties were coded into the data base with those surrounding contiguous counties listed for each as a cross reference. The rules used to determine whether counties were contiguous or not include: (1) possess a common boundary, (2) counties from adjoining states can be contiguous, and (3) large, land-locked bodies of water separating two or more counties would not be identified as contiguous unless their bodies touched.

The National Cancer Institute provided data tapes of the population densities of males/females/total over a 20 year period, 1950 to 1969. Population data from this source represents a summation of the population per year, from year 1 to 20. This provides a measure of total exposure over the prescribed time interval. For our purpose, rather than perform a detailed regression analysis, an average population exposure was calculated by county per:

$$\text{Average annual population exposure} = \sum_{i=1}^{20} \frac{\text{Female and male population by county}}{20}$$

The NCI data tape provided also a demographic breakout of population by race or type of people. For our purposes, and as necessary to be able to handle the extensive data base(s) of information, only the while population statistics were used.

The disease mortality rates were supplied from the National Cancer Epidemiology Branch Mortality System tapes made available for the PEDCo Environmental study. This data is a compilation taken from the HEW puplication, U.S. Cancer Mortality By County: 1950 to 1969. The time period covered by the mortality data should be identifical to that for which the census data applies. If mortality data covering different time periods for different disease categories is employed, it will be necessary to store more than one set of census data. Storing census data for different periods would require cross indexing disease specific mortality data to the applicable census data; such is not the case for this program. As stated before, statistics only for while population cancer mortality rates were utilized for this study. The specific disease cancers for which the manufacture of amines could be linked based on a comprehensive literature health effects survey are presented in Table 1.

Epidemiological Analysis Scheme Computations - Utilizing the data base systems input as previously described, three relative computations are useful in comparing mortality profiles between a county having an amines manufacturing and its contiguous counties:

(1) Normalized percentile mortality ranking

(2) Relative risk report

(3) Attributable risk

These computations as described further below are a measure of potential health impacts upon county-wide male, female, and total populations. The total population output is a weighted average based on a ratio of the actual number of males to the number of females in any one county.

The normalized percentile mortality ranking is calculated according to:

$$\text{Percentile} = 100 \times \frac{\text{Numberical county rank}}{\text{Number of contiguous + 1 counties}} - \frac{1}{2\ (\text{No. of continguous + 1})\ \text{counties}}$$

For example,

	Mortality rate (No. of deaths per disease per 100,000 given people)		Numerical ranking
Site county	5.9		7
Contiguous county No.			
1	5.4		5
2	4.2		2
3	6.5	(highest)	8
4	3.6	(lowest)	1
5	4.5		3
6	5.6		6
7	5.0		4

$$\text{Percentile} = 100 \times \frac{7}{7+1} - \frac{1}{(2)\ (8)} = 81$$

The value of this comparison essentially is to show evidence or give indications of possible trends of increase disease elevation when contrasting an amine-manufacturing site county with is contiguous counties. A percentile of 50 would be about normal by this calculation.

The relative risk computation is defined as the ratio (or percent greater than or less than 100) of a disease specific mortality rate (deaths/100,000) to the weighted average disease specific mortality rate of all of the surrounding counties. Mathematically, this equates to:

$$\text{Relative risk} = \frac{100 \times \text{site county mortality rate for any disease}}{\sum_{I=1}^{N} \frac{\text{Contiguous county mortality rate (I)}}{\sum_{\substack{J=1 \\ J \neq I}}^{N} \text{Contiguous county population (J)}}}$$

The above can be used for either male or female population numbers; an average risk calculation per the below provides a population (total) weighted average:

$$\text{Relative risk}_{AVG} = \frac{\text{Male relative risk}}{\frac{\text{Total population}}{\text{Male population}}} + \frac{\text{Female relative risk}}{\frac{\text{Total population}}{\text{Female population}}}$$

The attributable risk report is defined as the difference of the rate of site county and the weighted average mortality of surrounding counties. Mathematically, the calculation proceeeds to:

$$\text{Attributable risk} = \text{Site county mortality rate} - \sum_{I=1}^{N} \frac{\text{(Contiguous county mortality rate [I])}}{\sum_{\substack{J=1 \\ J \neq I}}^{N} \text{(Contiguous county population [J])}}$$

The average risk is a population weighted average of the male and female population calculated according to:

$$\text{Attributable risk}_{AVG} = \frac{\text{Male attributable risk}}{\frac{\text{Total population}}{\text{Male population}}} + \frac{\text{Female attributable risk}}{\frac{\text{Total population}}{\text{Female population}}}$$

Limitations and Uses of Program Outputs - The core scheme for generation of mortality profiles and its output as outlined in this paper were designed as investigative tools. This method of analysis can not prove cause and effect relationship; it can only generate circumstantial evidence linking emissions from stationary sources with adverse health impacts. However, the identification of adverse health impacts addositions is a necessary first step in the eventual proof of cause and effect relationships. Many variables which are known to influence mortality parameters can not be taken into account by the outlined analysis methodology. This fact does not imply the spurious associations can not be weeded out, but it does complicate quantitive interpretations of excess mortality associations. If either of the output options specified in this paper, attributable or relative risk determinations, are adopted several points must be kept in mind. These optional outputs are only valid if no ecological fallacies, there may be considerable variance in these quantitative parameters due to unaccounted for confounding variables.

APPENDIX D

FACILITY AND COUNTY DATA FOR 13 COUNTIES INCLUDED IN EPIDEMIOLOGICAL ANALYSIS

CONTENTS

County	Page
St. Charles, Louisiana	D-3
Erie, New York	D-6
St. Louis, Missouri	D-10
St. Clair, Illinois	D-13
Harris, Texas	D-16
Brazoria, Texas	D-19
Salam, New Jersey	D-22
Kanahwa, West Virginia	D-25
Warren, New Jersey	D-29
Summit, Ohio	D-32
Washington, Alabama	D-35
Vigo, Indiana	D-38
Somerset, New Jersey	D-41

SITE EVALUATION DATA

PLANT: Union Carbide Corp./Monsanto

COUNTY: St. Charles Parish (22089)

STATE: Louisiana

CITY OR TOWN: Taft/Luling

HISTORY: Union Carbide at Taft presently produces ethanolamines, and produced diisopropanolamine until 1975. Monsanto - No information is available on possible post production of anisidine or o-chloroaniline; however, cyclohexylamine was produced at one time at Monsanto's Saugus, Illinois plant.

AMINES PRODUCED: Union Carbide: Mono-di- and triethanolamines, diisopropanolamine
Monsanto: Anisidine, cyclohexylamine, o-chloroaniline.

TOTAL EXPOSED POPULATION: 302,094

AVERAGE ANNUAL POPULATION: 15,105

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

Code	County	Male	Female	Total
22051	Jefferson	88,433	90,339	178,772
22057	La Fourche	24,034	24,057	48,091
22095	St. John the Baptist	4,715	4,662	9,377

MORTALITY DATA - MALE (152,938)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	-	4.071	-	-	0	3.6	-	-
Stomach Cancer	9.644	15.097	6.665	-	9	12.5	72.0	-
Liver Cancer	2.238	5.124	3.230	-	2	4.4	44.9	-
Pancreas Cancer	11.678	9.554	8.044	-	9	8.4	107.1	-
Kidney Cancer	1.602	3.840	2.220	-	2	3.8	53.0	-
Bladder Cancer	7.738	6.719	6.362	-	6	5.3	113.4	-
Lung Cancer	60.164	37.725	17.337	H	51	36.0	141.6	-
AVERAGE/TOTAL	93.064	82.130			79	74.0	106.8	
ALL CANCERS	185.710	172.733	30.507	-	159	156.6	101.5	-

MORTALITY DATA - FEMALE (149,156)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	1.701	1.028	2.366	-	2	0.9	210.7	-
Stomach Cancer	15.233	7.683	8.227	-	14	7.0	201.3	-
Liver Cancer	2.029	5.334	2.882	L	2	4.9	40.6	-
Pancreas Cancer	3.792	5.815	4.539	-	3	5.3	56.1	-
Kidney Cancer	1.796	1.993	2.666	-	2	2.0	97.6	-
Bladder Cancer	2.496	2.379	3.461	-	2	2.1	96.8	-
Lung Cancer	4.370	6.282	4.302	-	4	6.3	63.4	-
AVERAGE/TOTAL	31.417	30.514			29	28.5	101.8	
ALL CANCERS	112.541	129.974	21.502	-	112	130.6	85.7	-

LA FOURCHE
48,091
ST. JOHN THE BAPTIST
9,377
ST. CHARLES
15,103
178,772
JEFFERSON

SITE EVALUATION DATA

PLANT: Buffalo Chemical and Color Company

COUNTY: Erie (36029)

STATE: New York

CITY OR TOWN: Buffalo

HISTORY: This plant originally belonged to National Aniline and Chemical Co. until that company merged into Allied Chemical Co. in the early 1900's. In 1977, Allied sold its dye facilities at Buffalo, New York to form Buffalo Chemical and Color. It is reported that until recently (1976) Allied produced relatively large quantities of Benzidine dyes at its Buffalo plant.

AMINES PRODUCED: N.N - Dimethylaniline, B- Naphthylamine, Toluidines, xylidines.

TOTAL EXPOSED POPULATION: 19,094,406

AVERAGE ANNUAL POPULATION: 954,720

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

Code	County	Male	Female	Total
36013	Chautaugua	68,784	72,794	141,578
36063	Niagara	108,074	109,392	217,466
36073	Orleans	16,049	16,327	32,376
36037	Genesee	25,720	26,339	52,059
36121	Wyoming	17,526	16,506	34,032
36009	Cataraugus	38,981	39,317	78,298

SITE EVALUATION DATA

PLANT: Allied Chemical Plant

COUNTY: Erie (36029)

STATE: New York

CITY OR TOWN: Buffalo

HISTORY: The Allied Chemical Division that produced/produces N, N-dimethylaniline is now known as Buffalo Chemical & Color Co. N, N, dimethylaniline is presently produced at this site; production of this chemical began 40-50 years ago. Allied Chemical sythesized their own benzidene for internal use from the 1920's up to 18 months ago. (July 1976).

AMINES PRODUCED: N, N-dimethylaniline

TOTAL EXPOSED POPULATION:

AVERAGE ANNUAL POPULATION:

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

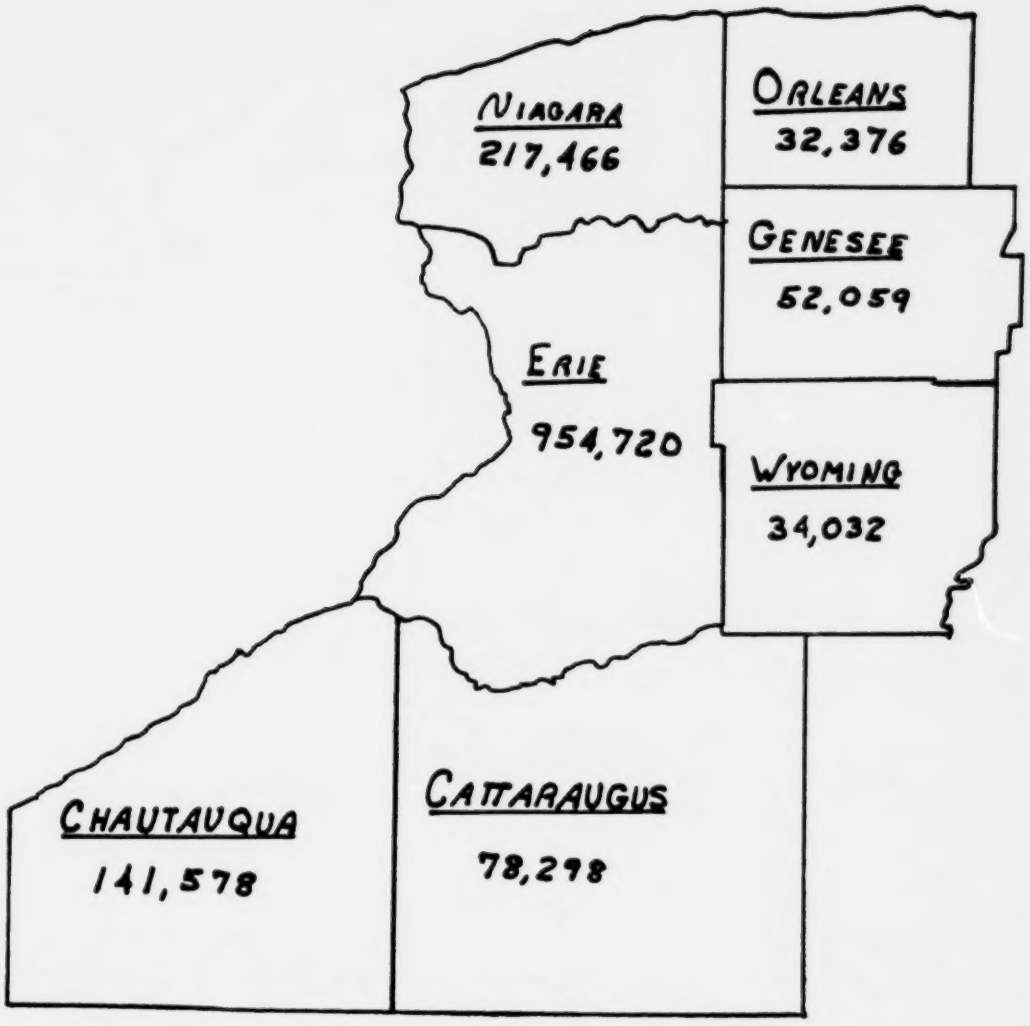
Code	County	Male	Female	Total

MORTALITY DATA - MALE (9,283,147)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	6.679	4.071	.533	H	616	375.5	164.0	H
Stomach Cancer	18.800	15.097	.903	H	1699	1350.2	125.8	H
Liver Cancer	5.747	5.124	.495	H	530	465.9	113.7	H
Pancreas Cancer	10.488	9.554	.667	H	969	875.6	110.6	H
Kidney Cancer	4.608	3.840	.436	H	438	359.9	121.6	H
Bladder Cancer	9.847	6.719	.659	H	874	591.0	147.8	H
Lung Cancer	47.742	37.725	1.399	H	4531	3589.5	126.2	H
AVERAGE/TOTAL	103.911	82.130			9657	7607.6	126.9	
ALL CANCERS	206.966	172.733	2.970	H	18959	15753.0	120.3	H

MORTALITY DATA - FEMALE (9,811,254)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	0.990	1.028	.185	-	113	114.5	98.6	-
Stomach Cancer	9.419	7.683	.570	H	1054	856.9	123.0	H
Liver Cancer	5.820	5.334	.450	H	648	592.9	109.3	-
Pancreas Cancer	6.090	5.815	.459	-	680	647.2	105.0	-
Kidney Cancer	2.182	1.993	.279	-	239	216.1	110.6	-
Bladder Cancer	2.953	2.379	.318	H	333	266.9	124.7	H
Lung Cancer	5.725	6.282	.448	L	631	690.5	91.3	-
AVERAGE/TOTAL	33.179	30.514			3698	3385	109.2	
ALL CANCERS	142.230	129.974	2.236	H	15598	14256.9	109.4	H


NIAGARA
217,466
ORLEANS
32,376
GENESEE
52,059
ERIE
954,720
WYOMING
34,032
CHAUTAUQUA
141,578
CATTARAUGUS
78,298

SITE EVALUATION DATA

PLANT: Monsanto

COUNTY: St. Louis (29189)

STATE: Missouri

CITY OR TOWN: St. Louis

HISTORY: O-choroaniline: Once in 1972, capability p-anisidine 1935-1972
Cyclohexylanine - present

AMINES PRODUCED: Anisidine, cyclohexylamine, o-chloroaniline

TOTAL EXPOSED POPULATION: 13,036,915

AVERAGE ANNUAL POPULATION: 651,846

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

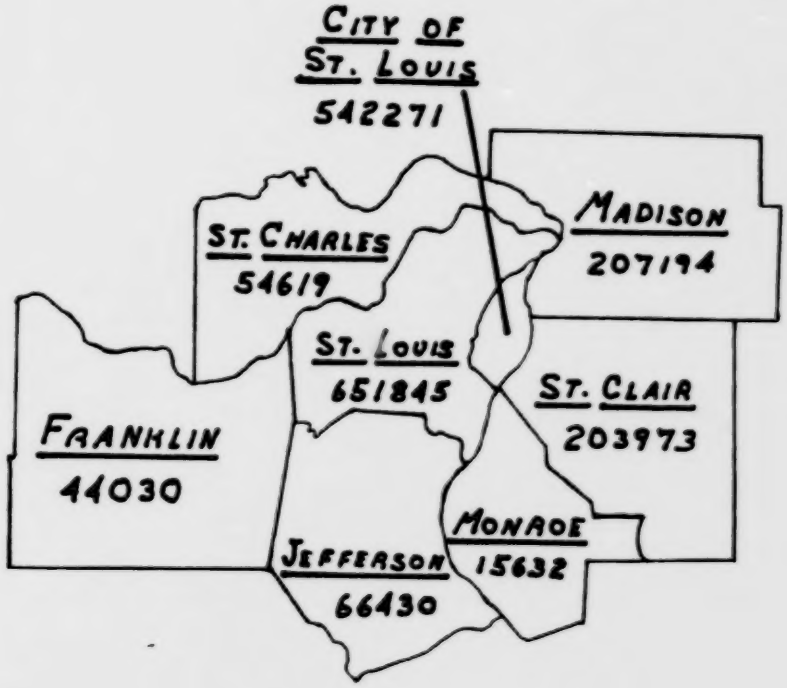
Code	County	Male	Female	Total
29099	Jefferson	33,495	32,935	66,430
29071	Franklin	21,852	22,178	44,030
29183	St. Charles	26,848	27,771	54,619
29510	St. Louis City	252,667	289,604	542,271
17119	Madison (Illinois)	101,420	105,768	207,188
17163	St. Clair (Ill.)	101,089	102,884	203,973
17133	Monroe (Illinois)	7,794	7,838	15,632

MORTALITY DATA - MALE (6,344,272)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	3.937	4.071	.573	-	192	203.0	94.5	-
Stomach Cancer	11.714	15.097	1.012	L	540	717.3	75.2	L
Liver Cancer	4.855	5.124	.642	-	233	250.6	92.9	-
Pancreas Cancer	10.330	9.554	.921	-	510	474.6	107.4	-
Kidney Cancer	4.218	3.840	.579	-	218	203.0	107.4	-
Bladder Cancer	7.732	6.719	.829	H	348	308.2	112.9	-
Lung Cancer	43.169	37.725	1.824	H	2257	1991.4	113.3	H
AVERAGE/TOTAL	85.955	82.130			4298	4148.1	103.6	
ALL CANCERS	181.411	172.733	3.849	H	9001	8647.3	104.0	H

MORTALITY DATA - FEMALE (6,692,643)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	.740	1.028	.212	L	48	65.5	73.3	-
Stomach Cancer	6.216	7.683	.617	L	394	488.1	80.7	L
Liver Cancer	5.304	5.334	.570	-	337	335.7	100.3	-
Pancreas Cancer	5.761	5.815	.593	-	366	367.2	99.6	-
Kidney Cancer	2.344	1.993	.378	-	151	126.4	119.4	-
Bladder Cancer	2.516	2.379	.391	-	161	150.9	106.6	-
Lung Cancer	7.151	6.282	.659	H	458	404.2	113.3	H
AVERAGE/TOTAL	30.032	30.514			1915	1938	98.8	
ALL CANCERS	131.979	129.974	2.818	-	8490	8371.8	101.4	-


CITY OF
ST. LOUIS
542271
MADISON
207194
ST. CHARLES
54619
ST. LOUIS
651845
ST. CLAIR
203973
FRANKLIN
44030
MONROE
15632
JEFFERSON
66430

SITE EVALUATION DATA

PLANT: Monsanto

COUNTY: St. Clair (17163)

STATE: Illinois

CITY OR TOWN: Sauget

HISTORY: P-Nitroaniline production at present, began 40 to 50 years ago.

AMINES PRODUCED: P-Nitroaniline

TOTAL EXPOSED POPULATION: 4,079,480

AVERAGE ANNUAL POPULATION: 203,974

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

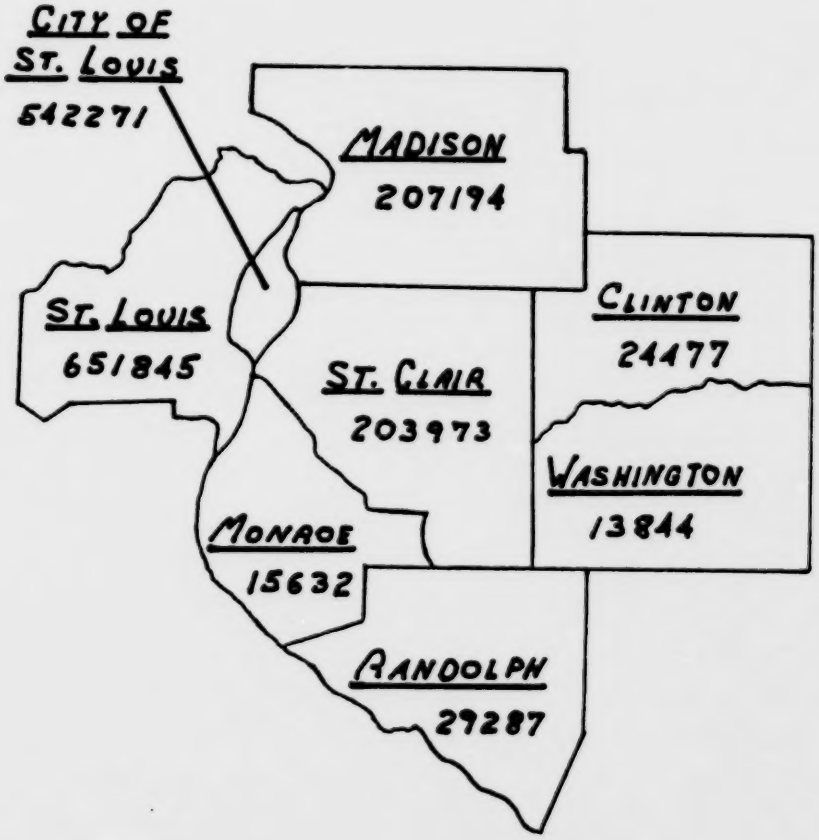
Code	County	Male	Female	Total
17133	Monroe	7,794	7,838	15,632
17157	Randolph	15,276	14,011	29,287
17189	Washington	6,871	6,973	13,844
17027	Clinton	12,216	12,261	24,477
17119	Madison	101,426	105,768	207,194
29510	St. Louis City(MO)	252,667	289,604	542,271
29189	St. Louis (MO)	317,213	334,632	651,845

MORTALITY DATA - MALE (2,021,784)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	5.838	4.071	1.103	H	109	75.7	143.9	H
Stomach Cancer	13.660	15.097	1.703	-	249	275.9	90.2	-
Liver Cancer	4.907	5.124	1.008	-	92	94.6	97.2	-
Pancreas Cancer	10.254	9.554	1.454	-	193	177.3	108.8	-
Kidney Cancer	4.446	3.840	.945	-	86	72.7	118.2	-
Bladder Cancer	6.245	6.719	1.153	-	114	121.3	93.9	-
Lung Cancer	49.627	37.725	3.168	H	949	716.3	132.4	H
AVERAGE/TOTAL	94.977	82.130			1792	1533.8	116.8	
ALL CANCERS	195.918	172.733	6.365	H	3667	3212.3	114.1	H

MORTALITY DATA - FEMALE (2,057,696)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	.604	1.028	.322	L	14	22.7	61.5	-
Stomach Cancer	7.033	7.683	1.104	-	157	171.2	91.7	-
Liver Cancer	6.115	5.334	1.035	-	135	117.8	114.6	-
Pancreas Cancer	5.861	5.815	1.015	-	129	128.5	100.3	-
Kidney Cancer	2.038	1.993	.601	-	45	43.2	104.2	-
Bladder Cancer	2.409	2.379	.642	-	55	53.5	102.8	-
Lung Cancer	6.613	6.282	1.083	-	144	136.5	105.5	-
AVERAGE/TOTAL	30.673	30.514			679	673.4	100.8	
ALL CANCERS	138.690	129.974	4.954	H	3021	2836.6	106.5	H


CITY OF
ST. LOUIS
542271
MADISON
207194
ST. LOUIS
651845
ST. CLAIR
203973
CLINTON
24477
WASHINGTON
13844
MONROE
15632
RANDOLPH
29287

SITE EVALUATION DATA

PLANT: Dupont

COUNTY: Harris (Texas)

STATE: Texas

CITY OR TOWN: LaPorte

HISTORY: Not available.

AMINES PRODUCED:

TOTAL EXPOSED POPULATION: 19,743,276

AVERAGE ANNUAL POPULATION: 987,164

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

Code	County	Male	Female	Total
48071	Chambers	4,021	3,937	7,958
48167	Galveston	54,747	55,427	110,174
48039	Brazoria	34,384	32,041	68,425
48157	Fort Bend	16,926	15,458	32,384
48473	Waller	2,898	2,949	5,847
48339	Montgomery	12,719	12,453	25,172
48291	Liberty	11,856	11,777	23,633

MORTALITY DATA - MALE (9,723,447)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	3.949	4.071	.512	-	251	258.9	96.9	-
Stomach Cancer	12.072	15.097	.914	L	739	903.5	81.7	L
Liver Cancer	6.079	5.124	.633	H	391	319.3	122.4	H
Pancreas Cancer	11.128	9.554	.858	H	707	607.1	116.4	H
Kidney Cancer	3.708	3.840	.481	-	255	267.5	95.3	-
Bladder Cancer	7.412	6.719	.745	-	408	381.5	106.9	-
Lung Cancer	53.516	37.725	1.807	H	3684	2596.1	141.9	H
AVERAGE/TOTAL	97.864	82.130			6435	5333.9	120.6	
ALL CANCERS	188.483	172.733	3.511	H	12286	11199.3	109.7	H

MORTALITY DATA - FEMALE (10,019,829)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	1.318	1.028	.260	H	102	78.6	129.7	-
Stomach Cancer	6.460	7.683	.578	L	493	580.6	84.9	L
Liver Cancer	4.240	5.334	.471	L	321	402.9	79.6	L
Pancreas Cancer	5.721	5.815	.543	-	437	440.1	99.2	-
Kidney Cancer	2.054	1.993	.321	-	165	158.3	104.2	-
Bladder Cancer	2.268	2.379	.345	-	169	175.8	96.1	-
Lung Cancer	8.778	6.282	.654	H	713	506.6	140.7	H
AVERAGE/TOTAL	30.847	30.514			2400	2342.9	102.4	
ALL CANCERS	124.176	129.974	2.467	L	10014	10475.4	95.5	L

WALLER
5847
MONTGOMERY
25172
LIBERTY
23633
HARRIS
987163
CHAMBERS
7958
FT. BEND
32384
GALVESTON
110174
BRAZORIA
68425

SITE EVALUATION DATA

PLANT: Dow Chemical Co.
COUNTY: Brazoria (48039)
STATE: Texas
CITY OR TOWN: Freeport
HISTORY: Not available.

AMINES PRODUCED: Mono,di, and triethanolamines

TOTAL EXPOSED POPULATION: 1,328,508
AVERAGE ANNUAL POPULATION: 66,425

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

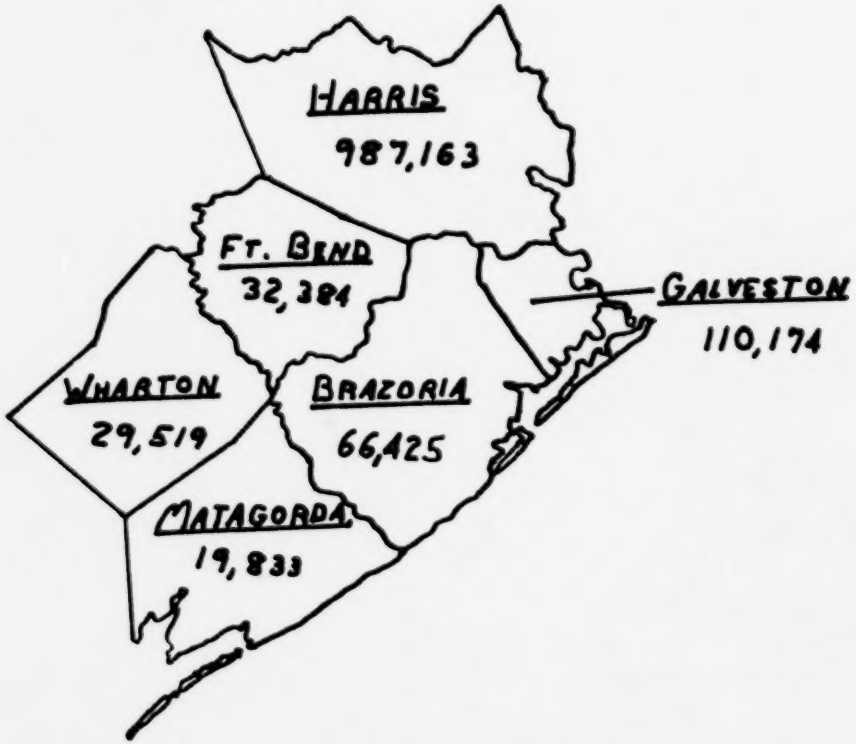
Code	County	Male	Female	Total
48167	Galveston	54,747	55,427	110,174
48201	Harris	486,172	500,991	987,163
48157	Fort Bend	16,926	15,458	32,384
48481	Wharton	14,799	14,720	29,519
48321	Matagorda	9,866	9,967	19,833

MORTALITY DATA - MALE (687,688)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	3.444	4.071	1.947	-	13	16.7	77.7	-
Stomach Cancer	14.587	15.097	3.963	-	58	58.5	99.0	-
Liver Cancer	5.496	5.124	2.504	-	20	20.7	96.6	-
Pancreas Cancer	11.666	9.554	3.406	-	50	39.4	126.9	-
Kidney Cancer	3.666	3.840	1.916	-	16	17.5	91.3	-
Bladder Cancer	4.064	6.719	2.181	L	14	24.6	56.8	-
Lung Cancer	42.562	37.725	6.330	-	192	168.4	114.0	-
AVERAGE/TOTAL	85.485	82.130			363	345.8	105.0	
ALL CANCERS	165.026	172.733	12.923	-	703	732.2	96.0	-

MORTALITY DATA - FEMALE (640,820)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	1.110	1.028	.924	-	6	4.3	140.9	-
Stomach Cancer	8.325	7.683	2.848	-	34	31.4	108.3	-
Liver Cancer	4.268	5.334	2.009	-	18	21.7	82.8	-
Pancreas Cancer	4.525	5.815	2.114	-	18	23.7	75.8	-
Kidney Cancer	1.324	1.993	1.115	-	6	8.9	67.5	-
Bladder Cancer	2.405	2.379	1.581	-	9	9.4	95.6	-
Lung Cancer	5.948	6.282	2.268	-	28	28.1	99.5	-
AVERAGE/TOTAL	27.905	30.514			119	127.5	93.3	
ALL CANCERS	113.951	129.974	10.100	L	520	584.5	88.9	L


HARRIS
987,163
FT. BEND
32,384
GALVESTON
110,174
WHARTON
29,519
BRAZORIA
66,425
MATAGORDA
19,833

SITE EVALUATION DATA

PLANT: Dupont

COUNTY: Salem (34033)

STATE: New Jersey

CITY OR TOWN: Deepwater

HISTORY: Not available.

AMINES PRODUCED:

TOTAL EXPOSED POPULATION: 965,134

AVERAGE ANNUAL POPULATION: 48,257

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

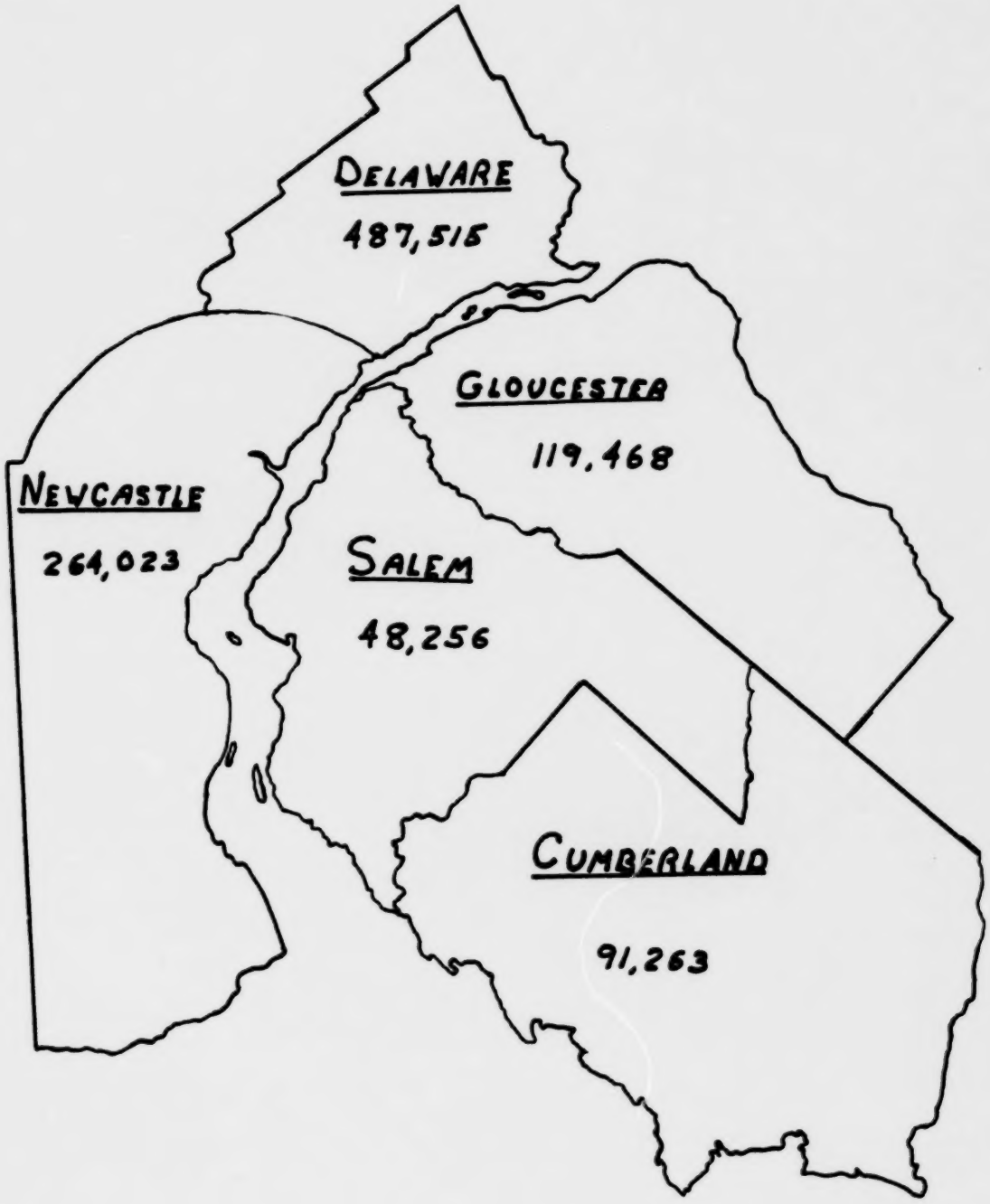
Code	County	Male	Female	Total
34011	Cumberland	43,447	47,816	91,263
34015	Gloucester	58,760	60,708	119,468
10003	Newcastle (Del.)	128,999	135,024	264,023
42045	Delaware (Pa.)	237,158	250,367	487,515

MORTALITY DATA - MALE (483,827)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	4.494	4.071	1.980	-	20	18.6	107.7	-
Stomach Cancer	15.074	15.097	3.625	-	67	67.5	99.2	-
Liver Cancer	4.282	5.124	1.888	-	20	23.1	86.4	-
Pancreas Cancer	10.311	9.554	2.932	-	48	43.4	110.5	-
Kidney Cancer	3.978	3.840	1.848	-	18	17.8	101.2	-
Bladder Cancer	16.082	6.719	3.705	H	73	29.7	245.8	H
Lung Cancer	39.799	37.725	5.744	-	186	175.5	105.9	-
AVERAGE/TOTAL	94.02	82.130			432	375.6	115.0	
ALL CANCERS	185.827	172.733	12.559	H	848	785.7	107.9	-

MORTALITY DATA - FEMALE (481,307)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	.783	1.028	.771	-	4	5.2	77.0	-
Stomach Cancer	6.557	7.683	2.247	-	33	39.1	84.3	-
Liver Cancer	6.386	5.334	2.219	-	32	26.7	119.8	-
Pancreas Cancer	7.713	5.815	2.461	-	38	29.2	130.1	-
Kidney Cancer	2.071	1.993	1.291	-	10	9.8	102.0	-
Bladder Cancer	3.623	2.379	1.639	-	19	12.3	155.0	-
Lung Cancer	6.945	6.282	2.315	-	35	31.2	112.1	-
AVERAGE/TOTAL	34.078	30.514			171	153.5	111.4	
ALL CANCERS	146.595	129.974	10.661	H	731	650.3	112.4	H


DELAWARE
487,515
GLOUCESTER
119,468
NEWCASTLE
264,023
SALEM
48,256
CUMBERLAND
91,263

SITE EVALUATION DATA

PLANT: Dupont
COUNTY: Kanahwa (54039)
STATE: West Virginia
CITY OR TOWN: Belle
HISTORY: Not available.

AMINES PRODUCED:

TOTAL EXPOSED POPULATION: 4,584,876
AVERAGE ANNUAL POPULATION: 229,244

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

Code	County	Male	Female	Total
54015	Clay	6,181	5,950	12,131
54067	Nicholas	12,806	12,570	25,376
54019	Fayette	28,123	28,364	56,487
54081	Raleigh	35,156	36,150	71,306
54005	Boone	14,645	14,105	28,750
54043	Lincoln	10,493	10,057	20,550
54079	Putnam	11,952	11,804	23,756
54035	Jackson	9,102	9,072	18,174
54087	Roane	8,041	8,022	16,063

SITE EVALUATION DATA

PLANT: Union Carbide

COUNTY: Kanahwa

STATE: West Virginia

CITY OR TOWN: South Charleston

HISTORY: Manufacture of Diisopropanolamine from 1953 to 1975. However, the secretary mentioned that it appears in the 1977 sales catalog.

AMINES PRODUCED: Diisopropanolamine

TOTAL EXPOSED POPULATION:

AVERAGE ANNUAL POPULATION:

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

Code	County	Male	Female	Total

MORTALITY DATA - MALE (2,227,569)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	3.543	4.071	.875	-	65	71.5	90.9	-
Stomach Cancer	13.826	15.097	1.784	-	238	256.3	92.8	-
Liver Cancer	6.563	5.124	1.220	H	115	88.9	129.4	-
Pancreas Cancer	10.177	9.554	1.522	-	177	167.4	105.7	-
Kidney Cancer	3.542	3.840	.883	-	64	70.6	90.6	-
Bladder Cancer	5.954	6.719	1.177	-	101	111.1	90.9	-
Lung Cancer	44.998	37.725	3.094	H	834	690.8	120.7	H
AVERAGE/TOTAL	88.603	82.130			1594	1460.6	109.1	
ALL CANCERS	172.278	172.733	6.174	-	3087	3055.9	101.0	-

MORTALITY DATA - FEMALE (2,357,307)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	1.036	1.028	.448	-	21	20.6	102.1	-
Stomach Cancer	6.993	7.683	1.169	-	139	152.4	91.1	-
Liver Cancer	6.386	5.334	1.116	-	127	105.9	119.9	-
Pancreas Cancer	6.790	5.815	1.151	-	135	115.6	116.8	-
Kidney Cancer	2.491	1.993	.687	-	52	40.6	128.1	-
Bladder Cancer	2.278	2.379	.670	-	45	46.5	96.6	-
Lung Cancer	7.349	6.282	1.179	-	151	129.8	116.3	-
AVERAGE/TOTAL	33.323	30.514			670	611.4	109.6	
ALL CANCERS	126.141	129.974	4.861	-	2617	2680.9	97.6	-

JACKSON
18,174
BOONE
16,063
PUTNAM
23,756
KANAWHA
229,243
CLAY
12,131
NICHOLAS
25,376
LINCOLN
20,550
BOONE
28,750
FAYETTE
56,487
RALEIGH
71,306

SITE EVALUATION DATA

PLANT: J. T. Baker Chemical Co.

COUNTY: Warren (34041)

STATE: New Jersey

CITY OR TOWN: Phillipsburg

HISTORY: They currently produce N,N-dimethylaniline but do not list Benzidine as an available product.

AMINES PRODUCED: N,N-dimethylaniline, Benzidine

TOTAL EXPOSED POPULATION: 1,251,819

AVERAGE ANNUAL POPULATION: 62,591

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

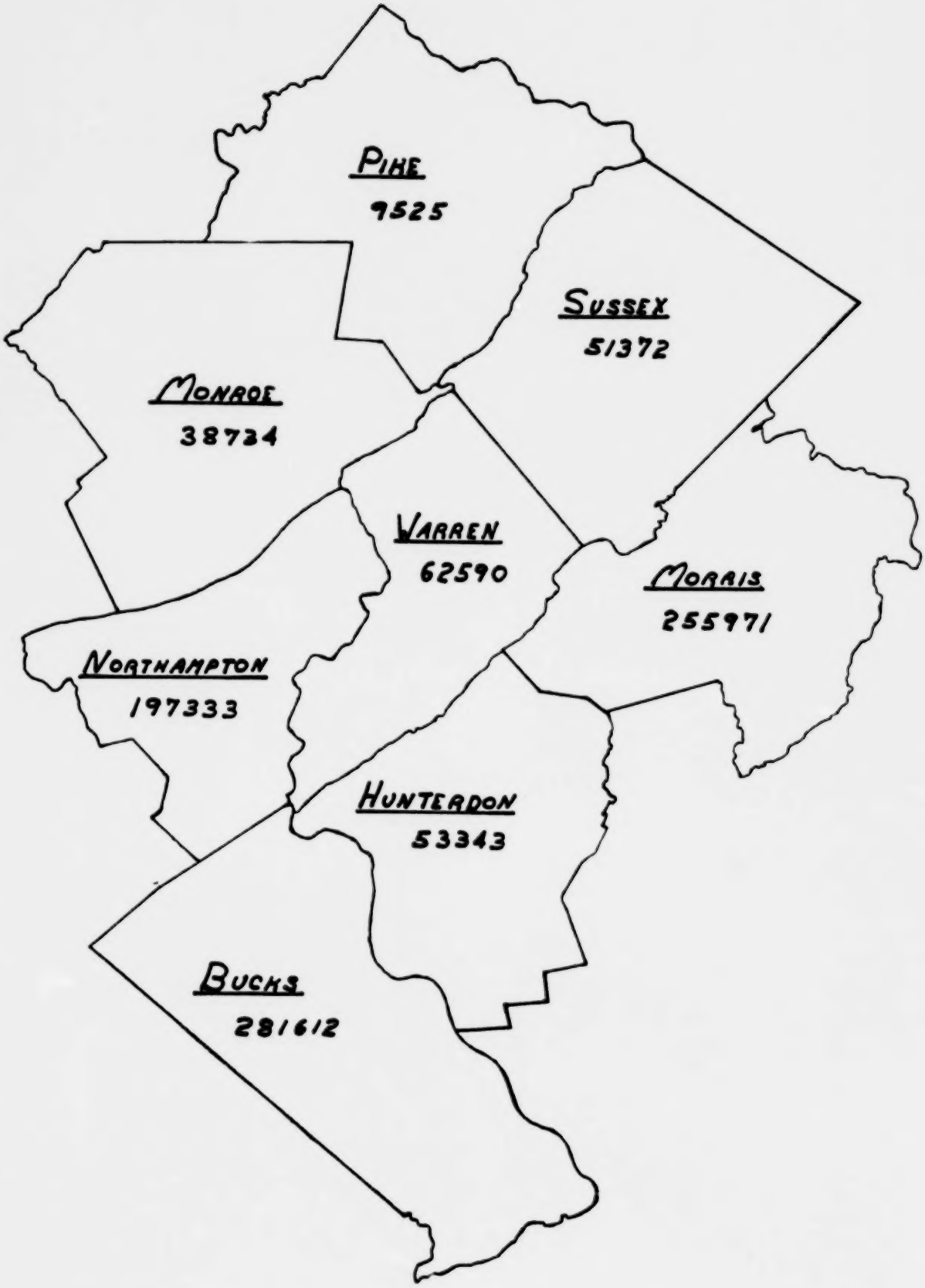
Code	County	Male	Female	Total
34019	Hunterdon	26,733	26,610	53,343
34027	Morris	125,081	130,890	255,971
34037	Sussex	25,424	25,848	51,372
42017	Bucks (Pa.)	140,353	141,259	281,612
42095	Northampton (Pa.)	97,687	99,646	197,333
42089	Monroe (Pa.)	18,929	19,805	38,734
42103	Pike (Pa.)	4,694	4,831	9,525

MORTALITY DATA - MALE (609,304)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	5.395	4.071	1.740	-	37	27.8	133.0	-
Stomach Cancer	14.335	15.097	2.842	-	98	102.7	95.3	-
Liver Cancer	4.819	5.124	1.650	-	33	34.9	94.6	-
Pancreas Cancer	10.095	9.554	2.386	-	69	65.1	105.9	-
Kidney Cancer	3.700	3.840	1.458	-	25	26.0	96.3	-
Bladder Cancer	7.854	6.719	2.098	-	54	45.7	118.1	-
Lung Cancer	41.566	37.725	4.839	-	284	258.0	110.0	-
AVERAGE/TOTAL	87.764	82.130			600	560.2	107.1	
ALL CANCERS	189.201	172.733	10.376	H	1281	1168.8	109.6	H

MORTALITY DATA - FEMALE (642,515)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	.592	1.028	.528	-	5	8.4	59.2	-
Stomach Cancer	7.503	7.683	1.844	-	65	64.3	101.1	-
Liver Cancer	6.113	5.334	1.730	-	49	43.7	112.2	-
Pancreas Cancer	8.429	5.815	2.038	H	67	47.7	140.4	-
Kidney Cancer	2.433	1.993	1.105	-	19	15.5	122.9	-
Bladder Cancer	3.172	2.379	1.171	-	29	20.5	141.8	-
Lung Cancer	5.935	6.282	1.735	-	46	48.7	94.3	-
AVERAGE/TOTAL	34.177	30.514			280	248.8	112.5	
ALL CANCERS	147.640	129.974	8.596	H	1162	1020.5	113.8	H


PIKE
9525
SUSSEX
51372
MONROE
38734
WARREN
62590
MORRIS
255971
NORTHAMPTON
197333
HUNTERDON
53343
BUCKS
281612

SITE EVALUATION DATA

PLANT: Unknown

COUNTY: Summit (39153)

STATE: Ohio

CITY OR TOWN: Akron

HISTORY: An undisclosed rubber-producing plant purchased and consumed β-Naphthylamine for over 20 years.

AMINES PRODUCED:

TOTAL EXPOSED POPULATION: 9,079,624

AVERAGE ANNUAL POPULATION: 453,981

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

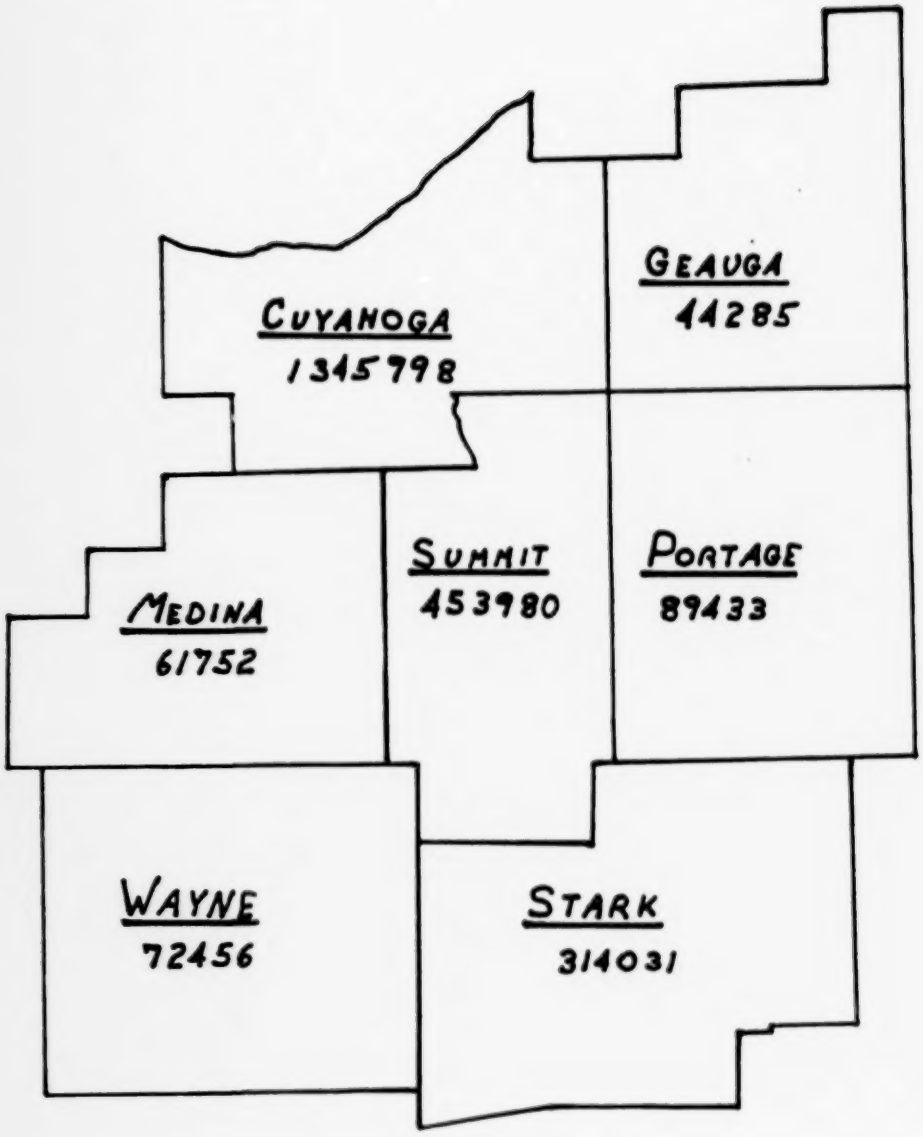
Code	County	Male	Female	Total
39133	Portage	44,901	44,532	89,433
39151	Stark	153,943	160,088	314,031
39169	Wayne	35,863	36,593	72,456
39103	Medina	30,801	30,951	61,752
39035	Cuyahoga	652,813	693,185	1,345,998
39055	Geanga	22,226	22,059	44,285

MORTALITY DATA - MALE (4,450,429)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	4.399	4.071	.651	-	180	167.7	107.3	-
Stomach Cancer	16,150	15.097	1.279	-	634	597.1	106.1	-
Liver Cancer	4.853	5.124	.686	-	199	207.5	95.9	-
Pancreas Cancer	10.416	9.554	1.017	-	418	390.4	107.0	-
Kidney Cancer	4.120	3.840	.623	-	174	162.6	106.9	-
Bladder Cancer	7.989	6.719	.911	H	307	259.8	118.1	H
Lung Cancer	39.003	37.725	1.897	-	1662	1619.6	102.6	-
AVERAGE/TOTAL	86.93	82.130			3574	3404	105.0	
ALL CANCERS	185.488	172.733	4.263	H	7509	7042.0	106.6	H

MORTALITY DATA - FEMALE (4,629,195)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	.858	1.028	.265	-	41	48.2	85.1	-
Stomach Cancer	3.146	7.683	.821	-	380	357.4	106.3	-
Liver Cancer	5.849	5.334	.696	-	273	248.8	109.7	-
Pancreas Cancer	6.121	5.815	.710	-	287	271.5	105.6	-
Kidney Cancer	1.672	1.993	.373	-	79	92.8	85.1	-
Bladder Cancer	2.754	2.379	.478	-	129	110.1	117.1	-
Lung Cancer	6.769	6.282	.743	-	320	297.2	107.6	-
AVERAGE/TOTAL	32.169	30.514			1509	1426	105.8	
ALL CANCERS	137.901	129.974	3.360	H	6486	6115.6	106.0	H


GEAUGA
44285
CUYAHOGA
1345798
SUMMIT
453980
PORTAGE
89433
MEDINA
61752
WAYNE
72456
STARK
314031

SITE EVALUATION DATA

PLANT: Ciba-Geigy
COUNTY: Washington (01129)
STATE: Alabama
CITY OR TOWN: McIntosh
HISTORY: Not available.

AMINES PRODUCED: Anthranolic Acid

TOTAL EXPOSED POPULATION: 203,697
AVERAGE ANNUAL POPULATION: 10,185

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

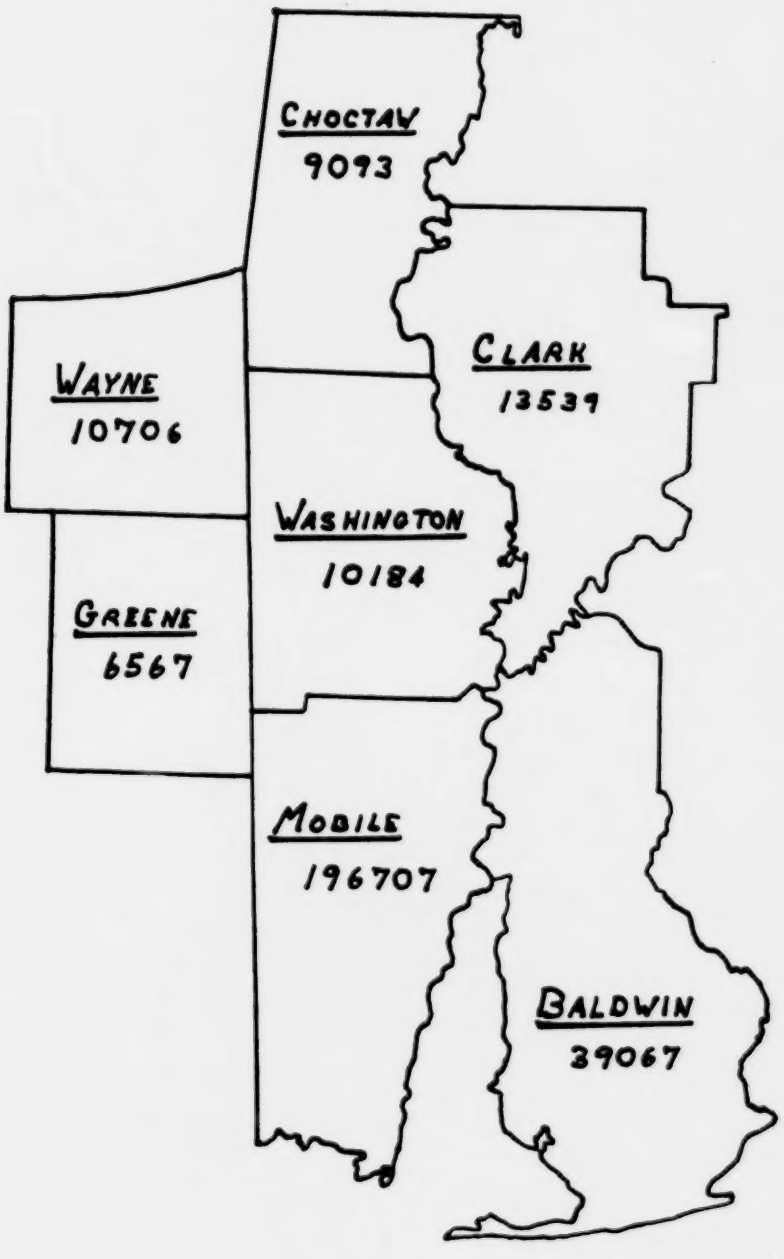
Code	County	Male	Female	Total
01023	Choctaw	4,603	4,490	9,093
01025	Clarke	6,710	6,829	13,539
01003	Baldwin	19,512	19,555	39,067
01097	Mobile	96,367	100,340	196,707
28041	Greene (Miss.)	3,328	3,239	6,567
28153	Wayne (Miss.)	5,365	5,341	10,706

MORTALITY DATA - MALE (102,575)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	4.630	4.071	4.548	-	4	3.5	113.1	-
Stomach Cancer	17.429	15.097	8.847	-	15	13.0	115.4	-
Liver Cancer	4.507	5.124	4.421	-	4	4.4	89.9	-
Pancreas Cancer	3.646	9.554	4.159	L	3	8.3	36.2	-
Kidney Cancer	0.000	3.840	0.000	-	0	3.4	0	-
Bladder Cancer	5.838	6.719	5.137	-	5	5.7	86.9	-
Lung Cancer	37.898	37.725	12.967	-	33	33.1	99.7	-
AVERAGE/TOTAL	73.948	82.130			64	71.4	89.6	
ALL CANCERS	150.645	172.733	26.019	-	130	150.9	86.1	-

MORTALITY DATA - FEMALE (101,122)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	4.660	1.028	4.572	-	4	0.9	451.3	-
Stomach Cancer	8.223	7.683	6.100	-	7	6.6	105.3	-
Liver Cancer	5.934	5.334	5.209	-	5	4.6	108.1	-
Pancreas Cancer	2.310	5.815	3.203	L	2	5.0	39.8	-
Kidney Cancer	1.138	1.993	2.233	-	1	1.8	56.7	-
Bladder Cancer	1.155	2.379	2.265	-	1	2.1	48.5	-
Lung Cancer	2.335	6.282	3.240	L	2	5.4	37.0	-
AVERAGE/TOTAL	25.755	30.514			22	26.4	83.3	
ALL CANCERS	114.009	129.974	22.512	-	99	112.8	87.7	-


CHOCTAW
9093
WAYNE
10706
CLARK
13539
WASHINGTON
10184
GREENE
6567
MOBILE
196707
BALDWIN
39067

SITE EVALUATION DATA

PLANT: International Minerals and Chemicals, Inc.

COUNTY: Vigo (18167)

STATE: Indiana

CITY OR TOWN: Terre Haute

HISTORY: Dimethylamine, Trimethylamine, and Monomethylamine are currently produced at their plant in Terre Haute, Vigo Cty., Indiana. Production began in late 1930's; Diisopropylamine may have been produced for a short time.

AMINES PRODUCED: Dimethylamine, Trimethylamine, Monomethylamine, (?) Diisopropylamine

TOTAL EXPOSED POPULATION: 2,078,787

AVERAGE ANNUAL POPULATION: 103,939

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

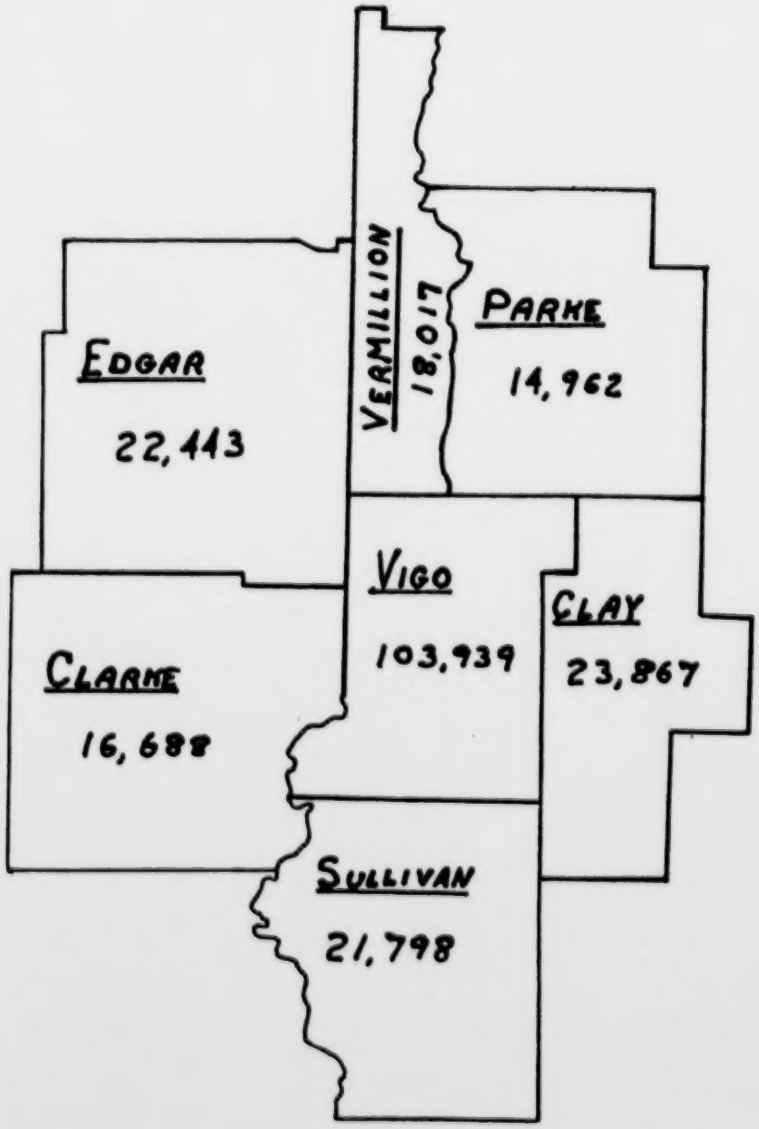
Code	County	Male	Female	Total
18153	Sullivan	10,637	11,161	21,798
18021	Clay	11,583	12,284	23,867
18121	Parke	7,461	7,501	14,962
18165	Vermillion	8,850	9,167	18,017
17023	Clarke (ILL)	8,182	8,506	16,688
17045	Edgar (ILL)	10,877	11,566	22,443

MORTALITY DATA - MALE (1,004,047)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	3.016	4.071	1.004	L	35	46.6	75.0	-
Stomach Cancer	12.715	15.097	2.072	L	146	174.4	83.7	-
Liver Cancer	6.375	5.124	1.460	-	74	58.8	125.8	-
Pancreas Cancer	9.374	9.554	1.774	-	108	109.3	98.7	-
Kidney Cancer	3.539	3.840	1.116	-	39	43.0	90.7	-
Bladder Cancer	7.086	6.719	1.549	-	81	78.2	103.5	-
Lung Cancer	48.157	37.725	4.069	H	541	426.2	126.9	H
AVERAGE/TOTAL	90.262	82.130			1024	936.3	109.4	
ALL CANCERS	180.760	172.733	7.871	-	2042	1965.2	103.9	-

MORTALITY DATA - FEMALE (1,074,740)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	.823	1.028	.473	-	12	14.7	81.4	-
Stomach Cancer	6.815	7.683	1.357	-	100	112.3	89.0	-
Liver Cancer	6.680	5.334	1.362	-	95	76.6	123.9	-
Pancreas Cancer	5.768	5.815	1.255	-	83	83.6	99.2	-
Kidney Cancer	2.922	1.993	.940	-	39	26.9	145.0	-
Bladder Cancer	2.845	2.379	.858	-	43	35.7	120.3	-
Lung Cancer	6.358	6.282	1.379	-	84	84.7	99.1	-
AVERAGE/TOTAL	32.311	30.514			456	434.5	104.9	
ALL CANCERS	144.191	139.974	6.511	H	1946	1771.1	109.8	H


EDGAR
22,443
VERMILLION
18,017
PARKE
14,962
VIGO
103,939
CLAY
23,867
CLARKE
16,688
SULLIVAN
21,798

SITE EVALUATION DATA

PLANT: American Cyanamid Co.

COUNTY: Somerset (34035)

STATE: New Jersey

CITY OR TOWN: Bound Brook

HISTORY: N,N-Dimethylaniline has been produced at the Bound Brook plant for about 20-25 years.

AMINES PRODUCED: N,N-Dimethylaniline

TOTAL EXPOSED POPULATION: 2,774,855

AVERAGE ANNUAL POPULATION: 138,743

CONTIGUOUS COUNTIES/POPULATIONS (Avg. Annual)

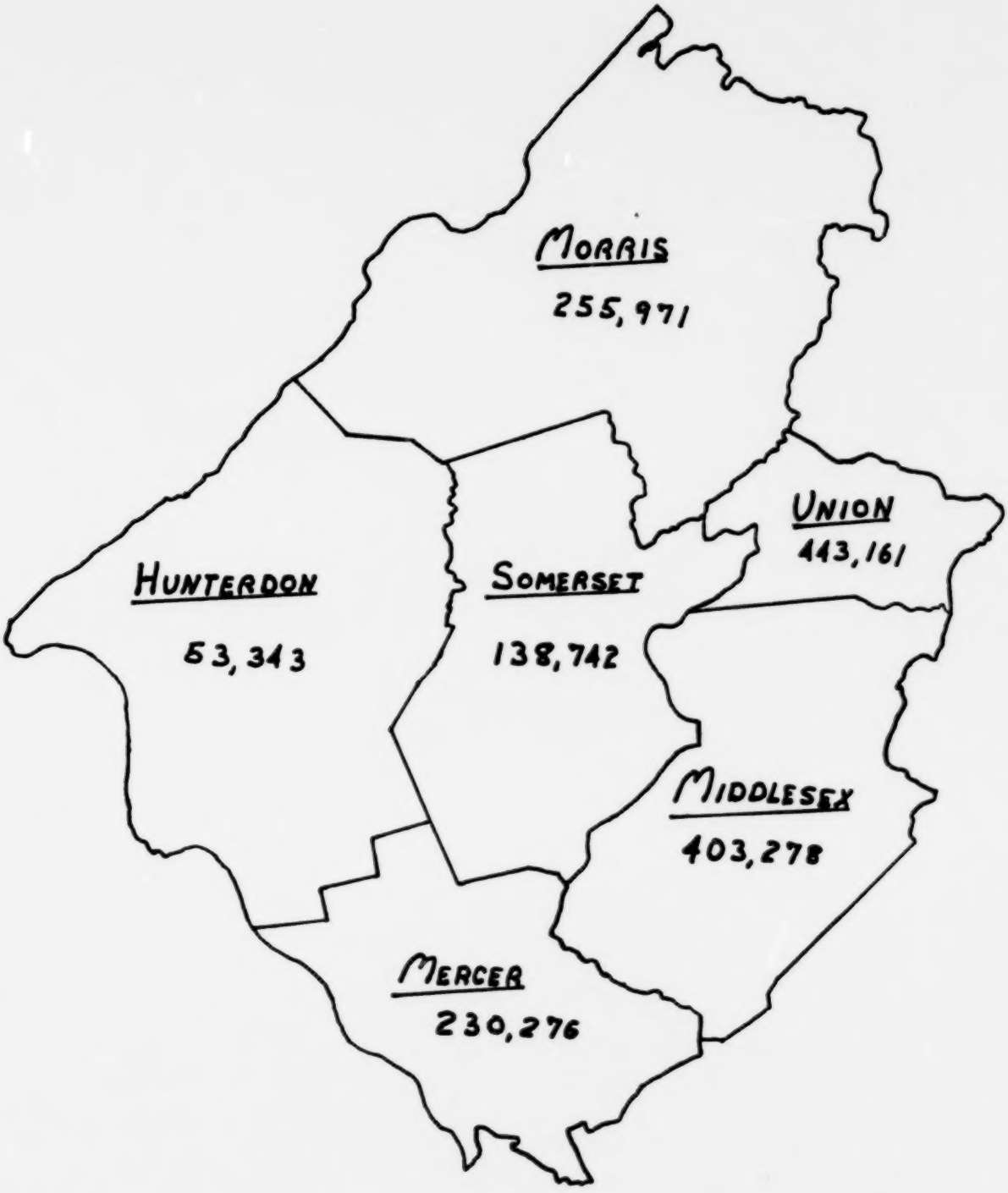
Code	County	Male	Female	Total
34023	Middlesex	200,911	202,367	403,278
34021	Mercer	113,809	116,467	230,276
34019	Hunterdon	26,733	26,610	53,343
34027	Morris	125,081	130,890	255,971
34039	Union	215,170	227,991	443,161

MORTALITY DATA - MALE (1,390,400)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	5.169	4.071	1.318	-	61	48.1	126.9	-
Stomach Cancer	18.096	15.097	2.527	-	203	171.6	118.3	-
Liver Cancer	4.499	5.124	1.228	-	54	59.5	90.6	-
Pancreas Cancer	10.460	9.554	1.878	-	124	112.6	110.1	-
Kidney Cancer	4.310	3.840	1.188	-	53	47.4	111.7	-
Bladder Cancer	7.850	6.719	1.704	-	84	74.1	113.4	-
Lung Cancer	44.170	37.725	3.804	H	536	467.6	114.6	H
AVERAGE/TOTAL	94.554	82.130			1115	980.9	113.7	
ALL CANCERS	182.711	172.733	7.865	H	2151	2043.4	105.2	-

MORTALITY DATA - FEMALE (1,384,455)

Disease	Rate	U.S. Rate	S.E.		Obsvd.	Exptd.	Rel. Risk	
Esophagus Cancer	1.135	1.028	.578	-	15	13.7	109.4	-
Stomach Cancer	8.612	7.683	1.584	-	115	102.8	111.8	-
Liver Cancer	4.653	5.334	1.183	-	60	70.2	85.4	-
Pancreas Cancer	6.033	5.815	1.337	-	79	76.9	102.7	-
Kidney Cancer	2.366	1.993	.841	-	31	26.3	117.9	-
Bladder Cancer	2.997	2.379	.926	-	41	31.9	128.5	-
Lung Cancer	8.578	6.282	1.591	H	113	84.3	134.0	H
AVERAGE/TOTAL	34.374	30.514			454	406.1	111.8	
ALL CANCERS	135.655	129.974	6.265	-	1820	1751.9	103.8	-


MORRIS
255,971
UNION
443,161
HUNTERDON
53,343
SOMERSET
138,742
MIDDLESEX
403,278
MERCER
230,276

APPENDIX E

CANCER MORTALITY RATES FOR SELECTED COUNTIES VERSUS THEIR CONTIGUOUS COUNTIES

E-1. ALL SITES RELATIVE RATE REPORT

Male/Female/Average

Disease/Site	Esophagus cancer	Stomach cancer	Liver cancer	Pancreas cancer	Kidney cancer	Bladder cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	145/109/138	121/128/123	123/109/115	124/115/120	112/134/118	127/130/127
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	86/104/ 90	92/ 85/ 90	75/ 80/ 78	97/ 97/ 98	92/107/ 97	86/108/ 92
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	0/271/ 39	63/248/116	44/ 45/ 44	97/ 71/ 90	44/ 73/ 56	81/113/ 88
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	87/ 88/ 89	118/125/121	93/ 97/ 95	105/ 78/ 98	96/ 64/ 87	55/106/ 68
IMC Plant						
Terre Haute, Indiana Vigo County 18167	169/ 99/145	106/101/104	112/ 88/ 98	101/127/110	87/137/104	138/133/136
DuPont Chemical Plant						
Belle, West Virginia Kanahwa County 54039	229/134/194	93/ 91/ 91	109/ 83/ 94	133/129/131	121/103/112	156/124/144
Deepwater, New Jersey Salem County 34033	92/ 82/ 92	101/ 86/ 97	83/119/101	112/138/122	98/113/104	186/123/173
LaPorte, Texas Harris County 48201	112/131/115	87/ 86/ 86	105/ 97/101	108/ 97/103	104/119/108	122/ 96/113
Monsanto Plant						
Sauget, Illinois St. Clair County 17163	115/ 68/110	102/110/106	79/100/ 90	104/104/105	104/ 96/102	73/ 92/ 79
St. Louis, Missouri St. Louis County 29189	69/ 81/ 71	82/ 99/ 86	72/ 81/ 77	107/106/107	98/120/106	93/ 92/ 93
Sherwin-Williams Plant*						
Cincinnati, Ohio Hamilton County 39061	120/112/117	117/105/112	116/100/107	114/119/115	116/ 92/106	140/121/133
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	116/460/188	154/132/147	84/171/119	33/ 46/ 37	0/ 60/ 21	81/ 44/ 72
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	127/ 64/117	89/ 95/ 90	97/111/104	106/149/123	86/117/ 96	88/123/ 96
Usage Site						
Akron, Ohio Summit County 39153	68/ 86/ 71	85/ 88/ 86	88/ 96/ 92	108/103/106	100/ 78/ 92	102/109/104

* Not included in analysis, see text.

E-1. ALL SITES RELATIVE RATE REPORT

Disease/Site	Mouth cancer	Trachea Bronchus, and Primary Lung cancer	Large Intestine cancer	Rectum cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	148/124/142	126/110/122	115/ 96/105	128/115/123	88/ 98/ 91	129/108/119
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	70/ 82/ 73	96/127/101	82/ 88/ 85	79/ 82/ 80	108/ 47/ 91	111/106/109
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	52/ 0/ 42	99/ 60/ 96	93/ 59/ 76	114/ 49/ 89	325/ 83/224	22/ 35/ 27
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	64/ 61/ 63	81/ 68/ 82	80/ 93/ 86	79/ 62/ 73	212/125/188	68/113/ 87
IMC Plant						
Terre Haute, Indiana Vigo County 18167	120/188/131	143/123/138	105/ 85/ 94	109/ 99/104	95/108/100	129/176/146
DuPont Chemical Plant						
Belle, West Virginia Kanawha County 54039	214/ 81/167	124/112/120	139/116/126	141/144/142	150/ 75/111	107/106/106
Deepwater, New Jersey Salem County 34033	48/ 80/ 54	88/ 98/ 91	78/ 95/ 87	87/105/ 95	122/ 90/115	96/ 63/ 84
LaPorte, Texas Harris County 48201	99/116/100	116/121/114	116/108/112	114/125/118	52/ 87/ 60	105/109/106
Monsanto Plant						
Sauget, Illinois St. Clair County 17163	106/ 92/107	107/ 99/109	97/106/101	103/ 94/101	141/151/146	90/ 94/ 92
St. Louis, Missouri St. Louis County 29189	64/ 99/ 69	90/111/ 93	103/101/102	82/ 86/ 84	68/ 74/ 70	127/106/118
Sherwin-Williams Plant*						
Cincinnati, Ohio Hamilton County 39061	135/102/127	118/108/114	123/110/116	131/136/132	85/107/ 91	95/114/101
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	49/168/ 74	74/ 31/ 69	83/ 87/ 85	60/ 0/ 33	48/336/138	33/ 84/ 53
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	118/ 44/103	107/ 94/104	131/ 94/111	132/116/125	128/179/142	120/ 96/110
Usage Site						
Akron, Ohio Summit County 39153	71/101/ 76	93/100/ 94	95/ 97/ 96	78/ 85/ 81	107/116/111	113/ 88/102

* Not included in analysis, see text.

E-1. ALL SITES RELATIVE RATE REPORT

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and other Lymphoma	Leukemia	All cancer
Allied Chemical Plant					
Buffalo, New York Erie County 36029	83/ 79/ 81	164/115/140	94/ 76/ 86	105/110/106	120/107/114
American Cyanamid Plant					
Bound Brook, New Jersey Somerset County 34035	46/ 54/ 49	78/ 75/ 77	68/ 72/ 70	89/107/ 97	89/ 92/ 91
Union Carbide Plant					
Taft, Louisiana St. Charles Parish 22089	0/ 96/ 24	147/278/200	112/ 29/ 80	146/211/170	91/ 99/ 95
Dow Chemical Co. Plant					
Freeport, Texas Brazoria County 48039	64/146/ 99	139/127/137	92/ 82/ 89	89/114/ 99	87/ 92/ 90
IMC Plant					
Terre Haute, Indiana Vigo County 18167	105/ 84/ 96	134/109/122	109/111/109	97/ 89/ 93	116/108/112
DuPont Chemical Plant					
Belle, West Virginia Kanawha County 54039	57/ 59/ 75	86/101/ 90	118/165/131	146/105/128	118/111/114
Deepwater, New Jersey Salem County 34033	66/288/150	105/ 41/ 81	113/ 88/104	115/113/115	98/105/100
LaPorte, Texas Harris County 48201	74/103/ 85	108/ 91/101	99/133/110	100/102/100	106/108/106
Monsanto Plant					
Sauget, Illinois St. Clair County 17163	125/133/129	81/ 76/ 80	97/ 99/ 99	108/ 96/ 104	101/102/102
St. Louis, Missouri St. Louis County 29189	81/ 86/ 83	106/140/117	105/119/111	104/ 98/102	91/ 96/ 94
Sherwin-Williams Plant*					
Cincinnati, Ohio Hamilton County 39061	92/100/ 95	113/114/112	115/104/110	104/114/108	115/107/111
Ciba-Giegy Plant					
McIntosh, Alabama Washington County 01129	87/ 0/ 52	40/ 0/ 31	18/ 86/ 43	48/151/ 88	81/ 94/ 87
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	117/114/115	123/110/117	59/126/ 86	89/109/97	105/108/106
Usage Site					
Akron, Ohio Summit County 39153	98/103/ 98	84/ 88/ 85	127/121/125	101/103/102	94/ 97/ 95

* Not included in analysis, see text.

E-1. All Sites Normalized Rate Report

Male/Female/Average

Disease/Site	Esophagus cancer	Stomach cancer	Liver cancer	Pancreas cancer	Kidney cancer	Bladder cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 64/ 78	92/ 92/ 92	78/ 64/ 71	92/ 92/ 92	92/ 92/ 92	92/ 78/ 85
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	58/ 74/ 66	41/ 41/ 41	8/ 24/ 16	41/ 58/ 49	41/ 91/ 66	8/ 58/ 33
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	87/ 87/ 87	12/ 87/ 49	12/ 12/ 12	62/ 37/ 50	12/ 12/ 12	37/ 87/ 62
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	24/ 58/ 41	58/ 41/ 50	58/ 24/ 42	74/ 24/ 50	41/ 8/ 25	24/ 74/ 49
IMC Plant						
Terre Haute, Indiana Vigo County 18167	78/ 64/ 71	78/ 64/ 71	64/ 49/ 58	49/ 78/ 64	35/ 78/ 57	78/ 78/ 76
DuPont Chemical Plant						
Belle, West Virginia Kanahwa County 54039	94/ 74/ 84	34/ 34/ 34	74/ 24/ 49	94/ 64/ 79	74/ 74/ 74	94/ 64/ 79
Deepwater, New Jersey Salem County 34033	49/ 9/ 30	49/ 9/ 30	9/ 89/ 49	69/ 89/ 79	49/ 69/ 59	89/ 69/ 80
LaPorte, Texas Harris County 48201	56/ 81/ 68	31/ 43/ 37	43/ 43/ 43	68/ 31/ 49	68/ 68/ 68	81/ 43/ 62
Monsanto Plant						
Sauget, Illinois St. Clair County 17163	81/ 56/ 68	56/ 81/ 68	31/ 43/ 37	81/ 81/ 81	81/ 56/ 68	6/ 43/ 25
St. Louis, Missouri St. Louis County 29189	18/ 68/ 44	18/ 31/ 25	18/ 6/ 12	81/ 68/ 74	68/ 81/ 75	68/ 43/ 55
Sherwin-Williams Plant*						
Cincinnati, Ohio Hamilton County 39061	72/ 61/ 66	72/ 61/ 66	83/ 49/ 65	72/ 83/ 78	83/ 27/ 54	94/ 72/ 82
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	78/ 92/ 85	92/ 92/ 92	49/ 78/ 64	7/ 21/ 14	99/ 7/ 53	35/ 64/ 49
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	81/ 31/ 55	6/ 31/ 19	43/ 68/ 56	31/ 93/ 87	6/ 68/ 38	6/ 81/ 44
Usage Site	* /					
Akron, Ohio Summit County 39153	49/ 64/ 57	64/ 78/ 71	64/ 21/ 42	92/ 49/ 71	78/ 35/ 58	78/ 92/ 85

* Not included in analysis, see text.

E-1. All Sites Normalized Rate Report

Male/Female/Average

Disease/Site	Mouth cancer	Trachea Bronchus, and Primary Lung cancer	Large Intestine cancer	Rectum cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 78/ 85	92/ 64/ 78	78/ 7/ 41	92/ 92/ 92	49/ 64/ 57	92/ 64/ 78
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	24/ 24/ 24	58/ 91/ 74	24/ 8/ 16	8/ 8/ 8	74/ 8/ 41	91/ 58/ 75
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	12/ 37/ 24	62/ 37/ 50	62/ 12/ 37	87/ 12/ 50	87/ 37/ 62	12/ 12/ 12
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	8/ 56/ 32	41/ 8/ 25	41/ 24/ 33	24/ 24/ 24	91/ 74/ 83	8/ 91/ 48
IMC Plant						
Terre Haute, Indiana Vigo County 18167	64/ 92/ 79	92/ 78/ 85	64/ 21/ 42	64/ 49/ 56	35/ 49/ 43	78/ 92/ 85
DuPont Chemical Plant						
Belle, West Virginia Kanahwa County 54039	94/ 34/ 64	84/ 74/ 79	94/ 74/ 84	84/ 94/ 90	74/ 24/ 49	64/ 64/ 64
Deepwater, New Jersey Salem County 34033	9/ 29/ 19	9/ 49/ 29	9/ 9/ 9	29/ 69/ 49	69/ 49/ 70	49/ 9/ 30
LaPorte, Texas Harris County 48201	68/ 56/ 62	81/ 93/ 87	68/ 68/ 68	68/ 81/ 75	6/ 56/ 31	31/ 68/ 50
Monsanto Plant						
Sauget, Illinois St. Clair County 17163	81/ 68/ 74	81/ 81/ 81	56/ 81/ 68	68/ 56/ 62	81/ 68/ 74	31/ 56/ 43
St. Louis, Missouri St. Louis County 29189	43/ 68/ 56	68/ 81/ 75	68/ 56/ 62	43/ 43/ 43	31/ 43/ 37	93/ 81/ 87
Sherwin-Williams Plant*						
Cincinnati, Ohio Hamilton County 39061	72/ 61/ 66	83/ 72/ 77	83/ 72/ 77	72/ 94/ 83	38/ 83/ 62	49/ 72/ 61
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	49/ 64/ 57	64/ 21/ 43	35/ 35/ 35	49/114/ 81	7/ 92/ 49	7/ 64/ 35
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	68/ 6/ 38	93/ 31/ 61	93/ 31/ 61	93/ 56/ 74	68/ 81/ 75	93/ 68/ 80
Usage Site						
Akron, Ohio Summit County 39153	64/ 78/ 71	78/ 49/ 64	78/ 49/ 64	35/ 21/ 28	64/ 92/ 78	92/ 49/ 71

* Not included in analysis, see text.

E-1. All Sites Normalized Rate Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Allied Chemical Plant					
Buffalo, New York Erie County 36029	35/ 49/ 43	92/ 78/ 85	35/ 7/ 21	64/ 78/ 71	92/ 92/ 92
American Cyanamid Plant					
Bound Brook, New Jersey Somerset County 34035	8/ 8/ 8	41/ 24/ 33	8/ 8/ 8	8/ 58/ 33	41/ 24/ 33
Union Carbide Plant					
Taft, Louisiana St. Charles Parish 22089	12/ 37/ 24	87/ 87/ 87	62/ 12/ 37	87/ 87/ 87	12/ 37/ 24
Dow Chemical Co. Plant					
Freeport, Texas Brazoria County 48039	24/ 74/ 49	91/ 58/ 75	58/ 41/ 50	41/ 91/ 65	41/ 41/ 41
IMC Plant					
Terre Haute, Indiana Vigo County 18167	64/ 49/ 56	78/ 64/ 71	64/ 78/ 71	35/ 35/ 35	92/ 92/ 92
DuPont Chemical Plant					
Belle, West Virginia Kanahwa County 54039	54/ 4/ 29	44/ 54/ 50	84/ 84/ 84	84/ 64/ 74	94/ 84/ 89
Deepwater, New Jersey Salem County 34033	9/ 89/ 49	49/ 9/ 30	49/ 29/ 40	89/ 89/ 89	29/ 89/ 59
LaPorte, Texas Harris County 48201	43/ 68/ 56	56/ 43/ 49	43/ 93/ 69	56/ 81/ 68	81/ 93/ 87
Monsanto Plant					
Sauget, Illinois St. Clair County 17163	81/ 43/ 62	31/ 56/ 43	56/ 68/ 62	68/ 31/ 49	81/ 81/ 81
St. Louis, Missouri St. Louis County 29189	31/ 43/ 37	81/ 81/ 81	68/ 81/ 75	56/ 56/ 56	68/ 68/ 68
Sherwin-Williams Plant*					
Cincinnati, Ohio Hamilton County 39061	81/ 38/ 49	61/ 72/ 68	83/ 27/ 54	49/ 72/ 61	83/ 72/ 77
Ciba-Giegy Plant					
McIntosh, Alabama Washington County 01129	7/ 42/ 24	7/ 85/ 46	7/ 21/ 14	7/ 92/ 49	64/ 64/ 64
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	93/ 68/ 80	68/ 81/ 75	6/ 93/ 51	18/ 68/ 44	93/ 68/ 80
Usage Site					
Akron, Ohio Summit County 39153	49/ 64/ 57	35/ 64/ 50	92/ 64/ 78	64/ 92/ 78	78/ 64/ 71

* Not included in analysis, see text.

E-1. Attributable Risk Report

Male/Female/Average

Disease/Site	Esophagus cancer	Stomach cancer	Liver cancer	Pancreas cancer	Kidney cancer	Bladder cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	2/ 0/ 1	3/ 2/ 3	1/ 1/ 1	2/ 1/ 1	1/ 1/ 1	2/ 1/ 1
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	0/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	0/ 0/ 0	0/ 0/ 0	0/ 0/ 0
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	-3/ 1/ 0	-5/ 9/ 2	-2/ -1/ -2	0/ -1/ 0	-1/ 0/ 0	-2/ 0/ 0
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	0/ 0/ 0	2/ 2/ 2	0/ 0/ 0	1/ 0/ 0	0/ 0/ 0	-2/ 0/ -1
IMC Plant						
Terre Haute, Indiana Vigo County 18167	1/ 0/ 1	1/ 0/ 0	1/ 0/ 0	0/ 1/ 1	0/ 1/ 0	2/ 1/ 1
DuPont Chemical Plant						
Belle, West Virginia Kanahwa County 54039	2/ 0/ 1	0/ 0/ 0	1/ 0/ 0	3/ 2/ 2	1/ 0/ 0	2/ 0/ 1
Deepwater, New Jersey Salem County 34033	0/ 0/ 0	0/ 0/ 0	0/ 1/ 0	1/ 2/ 2	0/ 0/ 0	7/ 1/ 4
LaPorte, Texas Harris County 48201	0/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	1/ 0/ 0	0/ 0/ 0	1/ 0/ 1
Monsanto Plant						
Sauget, Illinois St. Clair County 17163	1/ 0/ 0	0/ 1/ 1	0/ 0/ 0	0/ 0/ 0	0/ 0/ 0	-1/ 0/ 0
St. Louis, Missouri St. Louis County 29189	-1/ 0/ 0	-2/ 0/ 0	-1/ 0/ -1	1/ 0/ 1	0/ 0/ 0	0/ 0/ 0
Sherwin-Williams Plant*						
Cincinnati, Ohio Hamilton County 39061	1/ 0/ 0	2/ 0/ 1	1/ 0/ 0	1/ 1/ 1	1/ 0/ 0	3/ 1/ 1
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	1/ 4/ 2	6/ 2/ 4	0/ 2/ 1	-6/ -2/ -4	-2/ 0/ -1	0/ 0/ 0
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	1/ 0/ 0	-1/ 0/ 0	0/ 1/ 0	1/ 3/ 2	0/ 0/ 0	0/ 1/ 0
Usage Site						
Akron, Ohio Summit County 39153	-1/ 0/ 0	-2/ 0/ -1	0/ 0/ 0	1/ 0/ 1	0/ 0/ 0	0/ 0/ 0

* Not included in analysis, see text.

E-1. Attributable Risk Report

Male/Female/Average

Disease/Site	Mouth cancer	Trachea Bronchus, and Primary Lung cancer	Large Intestine cancer	Rectum cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	2/ 0/ 1	10/ 1/ 5	3/ 0/ 1	3/ 1/ 2	0/ 0/ 0	1/ 0/ 1
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	-1/ 0/ 0	-1/ 2/ 0	-3/ -1/ -2	-1/ 0/ -1	0/ 0/ 0	1/ 0/ 0
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	-2/ 0/ -1	0/ -2/ 0	0/ -4/ -2	1/ -1/ 0	4/ 0/ 2	-3/ -1/ -2
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	-1/ 0/ 0	-9/ -2/ -4	-2/ 0/ -1	0/ 0/ 0	2/ 0/ 1	0/ 0/ 0
IMC Plant						
Terre Haute, Indiana Vigo County 18167	1/ 1/ 1	14/ 1/ 1	1/ -2/ 0	1/ 0/ 0	0/ 0/ 0	1/ 2/ 1
DuPont Chemical Plant						
Belle, West Virginia Kanawha County 54039	2/ 0/ 1	9/ 1/ 4	4/ 2/ 3	1/ 1/ 1	0/ 0/ 0	0/ 0/ 0
Deepwater, New Jersey Salem County 34033	-1/ 0/ 0	-4/ 0/ -1	-3/ 0/ -2	0/ 0/ 0	0/ 0/ 0	0/ 0/ 0
LaPorte, Texas Harris County 48201	0/ 0/ 0	7/ 2/ 4	2/ 1/ 2	1/ 1/ 1	-1/ 0/ 0	0/ 0/ 0
Monsanto Plant						
Sauget, Illinois St. Clair County 17163	0/ 0/ 0	4/ 0/ 2	0/ 1/ 0	0/ 0/ 0	1/ 0/ 0	0/ 0/ 0
St. Louis, Missouri St. Louis County 29189	-2/ 0/ 0	-6/ 1/ -1	1/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	1/ 0/ [illegible]
Sherwin-Williams Plant*						
Cincinnati, Ohio Hamilton County 39061	2/ 0/ 1	7/ 1/ 3	4/ 2/ 3	3/ 2/ 2	0/ 0/ 0	0/ 0/ 0
J.La-Giegy Plant						
McIntosh, Alabama Washington County 01129	-2/ 1/ 0	-12/ -4/ -8	-1/ -1/ -1	-1/ -2/ -1	0/ 2/ 1	-3/ 0/ -1
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	1/ 0/ 0	3/ 0/ 1	3/ 0/ 2	3/ 1/ 2	0/ 0/ 0	1/ 0/ 0
Usage Site						
Akron, Ohio Summit County 39153	-1/ 0/ 0	-2/ 0/ -	0/ 0/ 0/	-1/ 0/ 0	0/ 0/ 0	1/ 0/ 0

* Not included in analysis, see text.

E-1. Attributable Risk Report

Male/Female/Average

Disease Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Allied Chemical Plant					
Buffalo, New York Erie County 36029	0/ 0/ 0	1/ 0/ 1	0/ 0/ 0	0/ 1/ 0	35/ 10/ 22
American Cyanamid Plant					
Bound Brook, New Jersey Somerset County 34035	0/ 0/ 0	0/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	-20/-10/-14
Union Carbide Plant					
Taft, Louisiana St. Charles Parish 22089	-1/ 0/ 0	1/ 2/ 1	1/ -1/ 0	4/ 6/ 5	-15/ 0 -7
Dow Chemical Co. Plant					
Freeport, Texas Brazoria County 48039	0/ 0/ 0	1/ 0/ 1	0/ 0/ 0	0/ 1/ 0	-22/ -8/-14
IMC Plant					
Terre Haute, Indiana Vigo County 18167	0/ 0/ 0	1/ 0/ 0	0/ 0/ 0	0/ 0/ 0	25/ 12/ 19
DuPont Chemical Plant					
Belle, West Virginia Kanawha County 54039	0/ 0/ 0	0/ 0/ 0	1/ 1/ 1	3/ 0/ 2	27/ 13/ 19
Deepwater, New Jersey Salem County 34033	0/ 1/ 1	0/ 0 0	1/ 0 0	1/ 1/ 1	-5/ 7/ 1
LaPorte, Texas Harris County 48201	0/ 0/ 0	0/ 0/ 0	0/ 1/ 0	0/ 0/ 0	12 10 10
Monsanto Plant					
Sauget, Illinois St. Clair County 17163	0/ 0 0	0/ 0/ 0	0/ 0/ 0	1/ 0/ 0	3/ 4/ 4
St. Louis, Missouri St. Louis County 29189	0/ 0 0	0/ 0/ 0	0 1/ 0	0 0 0	-15/ -4 -9
Sherwin-Williams Plant*					
Cincinnati, Ohio Hamilton County 39061	0 0/ 0	0/ 0/ 0	1/ 0/ 0	0 1/ 1	27 11 18
Ciba-Geigy Plant					
McIntosh, Alabama Washington County 01129	0 0 0	-1/ 0 0	-3/ 0/ -1	-4 3/ 0	-32 -6 -18
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	0 0 0	0/ 0 0	-1/ 1 0	0 0 0	10 12 11
Love Site					
Akron, Ohio Summit County 39153	0/ 0/ 0	0/ 0/ 0	1/ 1/ 1	0 0/ 0	-10 -2/ -6

* Not included in analysis, see text.

E-2. Secondary and Tertiary Amine Sites a Relative Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	63/248/116	52/ 0/ 42	0/271/ 39	93/ 59/ 76	114/ 49/ 89	44/ 45/ 44
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	116/125/121	64/ 61/ 65	87/ 88/ 89	80/ 93/ 86	79/ 62/ 73	93/ 97/ 95
IMC Plant						
Terre Haute, Indiana Vigo County 18167	106/101/104	120/188/131	169/ 99/145	105/ 85/ 94	109/ 99/104	112/ 88/ 98
Allied Chemical Plant						
Buffalo, New York Erie County 36029	121/128/123	148/124/142	145/109/138	115/ 96/105	128/115/123	123/109/115
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	89/ 95/ 90	118/ 44/103	127/ 64/114	131/ 94/111	132/116/125	97/111/104

E-2. Secondary and Tertiary Amine Sites a Relative Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	97/ 71/ 90	99/ 60/ 98	44/ 73/ 56	81/113/ 88	325/ 83/224	22/ 35/ 27
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	105/ 78/ 98	81/ 68/ 82	96/ 64/ 87	55/106/ 68	212/125/188	68/113/ 87
IMC Plant						
Terre Haute, Indiana Vigo County 18167	101/127/110	143/123/138	87/137/104	136/133/136	95/108/100	129/176/146
Allied Chemical Plant						
Buffalo, New York Erie County 36029	124/115/120	126/110/122	112/134/118	127/130/127	88/ 98/ 91	129/108/119
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	108/149/123	107/94/104	86/117/ 98	88/123/ 96	128/179/142	120/ 96/110

E-2. Secondary and Tertiary Amine Sites a Relative Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Union Carbide Plant					
Taft, Louisiana St. Charles Parish 22089	0/ 96/ 24	147/276/200	112/ 29/ 80	146/211/170	91/ 99/ 95
Dow Chemical Co. Plant					
Freeport, Texas Brazoria County 48039	64/146/ 99	139/127/137	92/ 82/ 89	89/114/ 99	87/ 92/ 90
IMC Plant					
Terre Haute, Indiana Vigo County 18167	105/ 84/ 96	134/103/122	109/111/109	97/ 89/ 93	116/108/112
Allied Chemical Plant					
Buffalo, New York Erie County 36029	83/ 79/ 81	164/115/140	94/ 76/ 86	105/110/106	120/107/114
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	117/114/115	123/110/117	59/126/ 86	89/109/ 97	105/108/106

E-2. Normalized Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	12/ 87/ 49	12/-12/ 0	-12/ 87/ 36	62/ 12/ 37	87/ 12/ 50	12/ 12/ 12
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	58/ 41/ 50	8/ 58/ 32	24/ 58/ 41	41/ 24/ 33	24/ 24/ 24	58/ 24/ 42
IMC Plant						
Terre Haute, Indiana Vigo County 18167	78/ 64/ 71	64/ 92/ 79	78/ 64/ 71	64/ 21/ 42	64/ 49/ 56	64/ 49/ 56
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 92/ 92	92/ 78/ 85	92/ 64/ 78	78/ 7/ 41	92/ 92/ 92	78/ 64/ 71
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	6/ 31/ 19	68/ 6/ 36	81/ 31/ 55	93/ 31/ 61	93/ 56/ 74	43/ 68/ 56

E-2. Normalized Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	62/ 37/ 50	62/ 37/ 50	12/ 12/ 12	37/ 87/ 62	87/ 37/ 62	12/ 12/ 12
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	74/ 24/ 50	41/ 8/ 25	41/ 8/ 25	24/ 74/ 49	91/ 74/ 83	8/ 91/ 48
IMC Plant						
Terre Haute, Indiana Vigo County 18167	49/ 78/ 64	92/ 78/ 85	35/ 78/ 57	78/ 78/ 78	35/ 49/ 43	78/ 92/ 85
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 92/ 92	92/ 64/ 78	92/ 92/ 92	92/ 78/ 85	49/ 64/ 57	92/ 64/ 78
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	81/ 93/ 87	93/ 31/ 61	6/ 68/ 38	6/ 81/ 44	68/ 81/ 75	93/ 68/ 80

E-2. Normalized Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Union Carbide Plant					
Taft, Louisiana St. Charles Parish 22089	-12/ 37/ 12	87/ 87/ 87	62/ 12/ 37	87/ 87/ 87	12/ 37/ 24
Dow Chemical Co. Plant					
Freeport, Texas Brazoria County 48039	24/ 74/ 49	91/ 58/ 75	58/ 41/ 50	41 91/ 65	41/ 41/ 41
IMC Plant					
Terre Haute, Indiana Vigo County 18167	64/ 49/ 56	78/ 64/ 71	64/ 78/ 71	35/ 35/ 35	92/ 92/ 92
Allied Chemical Plant					
Buffalo, New York Erie County 36029	35/ 49/ 43	92/ 78/ 85	35/ 7/ 21	64/ 78/ 71	92/ 92/ 92
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	93/ 68/ 80	68/ 81/ 75	6/ 93/ 51	18/ 68/ 44	93/ 68/ 80

E-2. Attributable Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	-5/ 9/ 2	-2/ 0/ -1	-3/ 1/ 0	0/ -4/ -2	1/ -1/ 0	-2/ -1/ -2
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	2/ 2/ 2	-1/ 0/ 0	0/ 0/ 0	-2/ 0/ -1	0/ 0/ 0	0/ 0/ 0
IMC Plant						
Terre Haute, Indiana Vigo County 18167	1/ 0/ 0	1/ 1/ 1	1/ 0/ 1	1/ -2/ 0	1/ 0/ 0	1/ 0/ 0
Allied Chemical Plant						
Buffalo, New York Erie County 36029	3/ 2/ 3	2/ 0/ 1	2/ 0/ 1	3/ 0/ 1	3/ 1/ 2	1/ 1/ 1
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	-1/ 0/ 0	1/ 0/ 0	1/ 0/ 0	6/ 0/ 2	3/ 1/ 2	0/ 1/ 0

E-2. Attributable Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Union Carbide Plant						
Taft, Louisiana St. Charles Parish 22089	0/ -1/ 0	0/ -2/ 0	-1/ 0/ 0	-1/ 0/ 0	4/ 0/ 2	-3/ -1/ -2
Dow Chemical Co. Plant						
Freeport, Texas Brazoria County 48039	1/ 0/ 0	-9/ -2/ -4	0/ 0/ 0	-2/ 0/ -1	2/ 0/ 1	0/ 0/ 0
IMC Plant						
Terre Haute, Indiana Vigo County 18167	0/ 1/ 1	14/ 1/ 7	0/ 1/ 0	2/ 1/ 1	0/ 0/ 0	1/ 2/ 1
Allied Chemical Plant						
Buffalo, New York Erie County 36029	2/ 1/ 1	10/ 1/ 5	1/ 1/ 1	2/ 1/ 1	0/ 0/ 0	1/ 0/ 1
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	1/ 3/ 2	3/ 0/ 1	0/ 0/ 0	0/ 1/ 0	0/ 0/ 0	1/ 0/ 0

E-2. Attributable Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Union Carbide Plant					
Taft, Louisiana St. Charles Parish 22089	-1/ 0/ 0	1/ 2/ 1	1/ -1/ 0	4/ 6/ 5	-15/ 0/ -7
Dow Chemical Co. Plant					
Freeport, Texas Brazoria County 48039	0/ 0/ 0	1/ 0/ 1	0/ 0/ 0	0/ 1/ 0	-22/ -8/-14
IMC Plant					
Terre Haute, Indiana Vigo County 18167	0/ 0/ 0	1/ 0/ 0	0/ 0/ 0	0/ 0/ 0	25/ 12/ 18
Allied Chemical Plant					
Buffalo, New York Erie County 36029	0/ 0/ 0	1/ 0/ 1	0/ 0/ 0	0/ 1/ 0	35/ 10/ 22
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	0/ 0/ 0	0/ 0/ 0	-1/ 1/ 0	0/ 0/ 0	10/ 12/ 11

E-3. Amine and Dye Manufacturing Sites

A Relative Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	121/128/123	148/124/142	145/109/138	115/ 96/105	128/115/123	123/109/115
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	154/132/147	49/168/ 74	116/460/188	83/ 87/ 85	60/ 0/ 33	84/171/119
DuPont Chemical Plant						
Deepwater, New Jersey Salem County 34033	101/ 86/ 97	48/ 80/ 54	92/ 82/ 92	78/ 95/ 87	87/105/ 95	83/119/101
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	92/ 85/ 90	70/ 82/ 73	86/104/ 90	82/ 88/ 85	79/ 82/ 80	75/ 80/ 78

E-3. Amine and Dye Manufacturing Sites

A Relative Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	124/115/120	126/110/122	112/134/118	127/130/127	88/ 98/ 91	129/108/119
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	33/ 46/ 37	74/ 31/ 69	0/ 60/ 21	81/ 44/ 72	48/336/138	33/ 84/ 53
DuPont Chemical Plant						
Deepwater, New Jersey Salem County 34033	112/138/122	88/ 98/ 91	98/113/104	186/123/173	122/ 90/115	96/ 63/ 84
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	97/ 97/ 98	96/127/101	92/107/ 97	86/108 92	108/ 47/ 91	111/106/109

E-3. Amine and Dye Manufacturing Sites

A Relative Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Allied Chemical Plant					
Buffalo, New York Erie County 36029	83/ 79/ 81	164/115/140	94/ 76/ 86	105/110/106	120/107/114
Ciba-Giegy Plant					
McIntosh, Alabama Washington County 01129	87/ 0/ 52	40/ 0/ 31	18/ 86/ 43	48/151/ 88	81/ 94/ 87
DuPont Chemical Plant					
Deepwater, New Jersey Salem County 34033	66/288/150	105/ 41/ 81	113/ 88/104	115/113/115	96/105/100
American Cyanamid Plant					
Bound Brook, New Jersey Somerset County 34035	46/ 54/ 49	78/ 75/ 77	68/ 72/ 70	89/107/ 97	89/ 92/ 91

E-3. Normalized Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 92/ 92	92/ 78/ 85	92/ 64/ 78	78/ 7/ 41	92/ 92/ 92	78/ 64/ 71
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	92/ 92/ 92	49/ 64/ 57	78/ 92/ 85	35/ 35/ 35	49/ 85/ 67	49/ 78/ 64
DuPont Chemical Plant						
Deepwater, New Jersey Salem County 34033	49/ 9/ 30	9/ 29/ 19	49/ 9/ 30	9/ 9/ 9	29/ 69/ 49	9/ 89/ 49
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	41/ 41/ 41	24/ 24/ 24	58/ 74/ 66	24/ 8/ 16	8/ 8/ 8	8/ 24/ 16

E-3. Normalized Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 92/ 92	92/ 64/ 78	92/ 92/ 92	92/ 78/ 85	49/ 64/ 57	92/ 64/ 78
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	7/ 21/ 14	64/ 21/ 43	85/ 7/ 46	35/ 64/ 49	7/ 92/ 49	7/ 64/ 35
DuPont Chemical Plant						
Deepwater, New Jersey Salem County 34033	69/ 89/ 79	9/ 49/ 29	49/ 69/ 59	89/ 69/ 80	89/ 49/ 70	49/ 9/ 30.
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	41/ 58/ 49	58/ 91/ 74	41/ 91/ 66	6/ 58/ 33	74/ 8/ 41	91/ 58/ 75

E-3. Normalized Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Allied Chemical Plant					
Buffalo, New York Erie County 36029	35/ 49/ 43	92/ 78/ 85	35/ 7/ 21	64/ 78/ 71	92/ 92/ 92
Ciba-Giegy Plant					
McIntosh, Alabama Washington County 01129	7/ 42/ 24	7/ 71/ 39	7/ 21/ 14	7/ 92/ 49	64/ 64/ 64
DuPont Chemical Plant					
Deepwater, New Jersey Salem County 34033	9/ 89/ 49	49/ 9/ 30	49/ 29/ 40	89/ 89/ 89	29/ 89/ 59
American Cyanamid Plant					
Bound Brook, New Jersey Somerset County 34035	8/ 8/ 8	41/ 24/ 33	8/ 8/ 8	8/ 58/ 33	41/ 24/ 33

E-3. Attributable Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	3/ 2/ 3	2/ 0/ 1	2/ 0/ 1	3/ 0/ 1	3/ 1/ 2	1/ 1/ 1
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	6/ 2/ 4	-2/ 1/ 0	1/ 4/ 2	-1/ -1/ -1	-1/ -2/ -1	0/ 2/ 1
DuPont Chemical Plant						
Deepwater, New Jersey Salem County 34033	0/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	-3/ 0/ -2	0/ 0/ 0	0/ 1/ 0
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	-1/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	-3/ -1/ -2	-1/ 0/ -1	0/ 0/ 0

E-3. Attributable Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	2/ 1/ 1	10/ 1/ 5	1/ 1/ 1	2/ 1/ 1	0/ 0/ 0	1/ 0/ 1
Ciba-Giegy Plant						
McIntosh, Alabama Washington County 01129	-6/ -2/ -4	-12/ -4/ -8	-2/ 0/ -1	0/ 0/ 0	0/ 2/ 1	-3/ 0/ -1
DuPont Chemical Plant						
Deepwater, New Jersey Salem County 34033	1/ 2/ 2	-4/ 0/ -1	0/ 0/ 0	7/ 1/ 4	0/ 0/ 0	0/ 0/ 0
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	0/ 0/ 0	-1/ 2/ 0	0/ 0/ 0	0/ 0/ 0	0/ 0/ 0	1/ 0/ 0

E-3. Attributable Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Allied Chemical Plant Buffalo, New York Erie County 36029	0/ 0/ 0	1/ 0/ 1	0/ 0/ 0	0/ 1/ 0	35/ 10/ 22
Ciba-Giegy Plant McIntosh, Alabama Washington County 01129	0/ 0/ 0	-1/ 0/ 0	-3/ 0/ -1	-4/ 3/ 0	-32/ -6/-18
DuPont Chemical Plant Deepwater, New Jersey Salem County 34033	0/ 1/ 1	0/ 0/ 0	1/ 0/ 0	1/ 1/ 1	-5/ 7/ 1
American Cyanamid Plant Bound Brook, New Jersey Somerset County 34035	0/ 0/ 0	0/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	-20/-10/-14

E-4. Amine and Nitric Acid Sites

A Relative Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	92/ 85/ 90	70/ 82/ 73	86/104/90	62/ 88/ 85	79/ 82/ 80	75/ 80/ 78
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	89/ 95/ 90	118/ 44/103	127/ 64/114	131/ 94/111	132/116/125	97/111/104
Allied Chemical Plant						
Buffalo, New York Erie County 36029	121/128/123	148/124/142	145/109/138	115/ 96/105	128/115/123	123/109/115
Monsanto Plant						
Taft, Louisiana St. Charles Parish 22089	63/248/116	52/ 0/ 42	0/271/ 39	93/ 59/ 76	114/ 49/ 89	44/ 45/ 44
St. Louis, Missouri St. Louis County 29189	82/ 95/ 86	64/ 99/ 69	69/ 81/ 71	103/101/102	82/ 86/ 84	72/ 81/ 77

E-4. Amine and Nitric Acid Sites

A Relative Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	97/ 97/ 98	96/127/101	92/107/ 97	86/108/ 92	108/ 47/ 91	111/106/109
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	106/149/123	107/ 94/104	86/117/ 96	88/123/ 96	128/179/142	120/ 96/110
Allied Chemical Plant						
Buffalo, New York Erie County 36029	124/115/120	126/110/122	112/134/118	127/130/127	88/ 98/ 91	129/108/119
Monsanto Plant						
Taft, Louisiana St. Charles Parish 22089	97/ 71/ 90	99/ 60/ 96	44/ 73/ 56	81/113/ 88	325/ 83/224	22/ 35/ 27
St. Louis, Missouri St. Louis County 29189	107/106/107	90/111/ 93	98/120/106	93/ 92/ 93	68/ 74/ 70	127/106/118

E-4. Amine and Nitric Acid Sites

A Relative Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
American Cyanamid Plant					
Bound Brook, New Jersey Somerset County 34035	46/ 54/ 49	78/ 75/ 77	68/ 72/ 70	89/107/ 97	89/ 92/ 91
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	117/114/115	123/110/117	59/126/ 86	89/109/ 97	105/108/106
Allied Chemical Plant					
Buffalo, New York Erie County 36029	83/ 79/ 81	164/115/140	94/ 76/ 86	105/110/106	120/107/114
Monsanto Plant					
Taft, Louisiana St. Charles Parish 22089	0/ 96/ 24	147/278/200	112/ 29/ 80	146/211/170	91/ 99/ 95
St. Louis, Missouri St. Louis County 29189	81/ 88/ 83	106/140/117	105/119/111	104/ 98/102	91/ 96/ 94

E-4. Normalized Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	41/ 41/ 41	24/ 24/ 24	58/ 64/ 66	24/ 8/ 16	8/ 8/ 8	8/ 24/ 16
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	6/ 31/ 19	68/ 6/ 36	81/ 31/ 55	93/ 31/ 61	93/ 56/ 74	43/ 68/ 56
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 92/ 92	92/ 78/ 85	92/ 64/ 78	78/ 7/ 41	92/ 92/ 92	78/ 64/ 71
Monsanto Plant						
Taft, Louisiana St. Charles Parish 22089	12/ 87/ 49	12/ 37/ 24	87/ 87/ 87	62/ 12/ 37	87/ 12/ 50	12/ 12/ 12
St. Louis, Missouri St. Louis County 29189	18/ 31/ 25	43/ 68/ 56	18/ 68/ 44	68/ 56/ 62	43/ 43/ 43	18/ 6/ 12

E-4. Normalized Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	41/ 58/ 49	58/ 91/ 74	41/ 91/ 66	8/ 58/ 33	74/ 8/ 41	91/ 58/ 75
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	81/ 93/ 87	93/ 31/ 61	6/ 68/ 38	6/ 81/ 44	68/ 81/ 75	93/ 68/ 80
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 92/ 92	92/ 64/ 76	92/ 92/ 92	92/ 78/ 85	49/ 64/ 57	92/ 64/ 78
Monsanto Plant						
Taft, Louisiana St. Charles Parish 22089	62/ 37/ 50	62/ 37/ 50	12/ 12/ 12	37/ 87/ 62	87/ 37/ 62	12/ 12/ 12
St. Louis, Missouri St. Louis County 29189	81/ 68/ 74	68/ 81/ 75	68/ 81/ 75	68/ 43/ 55	31/ 43/ 37	93/ 81/ 87

E-4. Normalized Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
American Cyanamid Plant					
Bound Brook, New Jersey Somerset County 34035	8/ 8/ 8	41/ 24/ 33	8/ 8/ 8	8/ 58/ 33	41/ 24/ 33
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	93/ 68/ 80	68/ 81/ 75	6/ 93/ 51	18/ 68/ 44	93/ 68/ 80
Allied Chemical Plant					
Buffalo, New York Erie County 36029	35/ 49/ 43	92/ 78/ 85	35/ 7/ 21	64/ 78/ 71	92/ 92/ 92
Monsanto Plant					
Taft, Louisiana St. Charles Parish 22089	62/ 37/ 50	87/ 87/ 87	62/ 12/ 37	87/ 87/ 87	12/ 37/ 24
St. Louis, Missouri St. Louis County 29189	31/ 43/ 37	81/ 81/ 81	68/ 81/ 75	56/ 56/ 56	68/ 68/ 68

E-4. Attributable Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	-1/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	-3/ -1/ -2	-1/ 0/ -1	0/ 0/ 0
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	-1/ 0/ 0	1/ 0/ 0	1/ 0/ 0	6/ 0/ 2	3/ 1/ 2	0/ 1/ 0
Allied Chemical Plant						
Buffalo, New York Erie County 36029	3/ 2/ 3	2/ 0/ 1	2/ 0/ 1	3/ 0/ 1	3/ 1/ 2	1/ 1/ 1
Monsanto Plant						
Taft, Louisiana St. Charles Parish 22089	-5/ 9/ 2	-2/ 0/ -1	-3/ 1/ 0	0/ -4/ -2	1/ -1/ 0	-2/ -1/ -2
St. Louis, Missouri St. Louis County 29189	-2/ 0/ 0	-2/ 0/ 0	-1/ 0/ 0	1/ 0/ 0	-1/ 0/ 0	-1/ 0/ -1

E-4. Attributable Risk Report

Male/Female/Average

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
American Cyanamid Plant						
Bound Brook, New Jersey Somerset County 34035	0/ 0/ 0	-1/ 2/ 0	0/ 0/ 0	0/ 0/ 0	0/ 0/ 0	1/ 0/ 0
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	1/ 3/ 2	3/ 0/ 1	0/ 0/ 0	0/ 1/ 0	0/ 0/ 0	1/ 0/ 0
Allied Chemical Plant						
Buffalo, New York Erie County 36029	2/ 1/ 1	10/ 1/ 5	1/ 1/ 1	2/ 1/ 1	0/ 0/ 0	1/ 0/ 1
Monsanto Plant						
Taft, Louisiana St. Charles Parish 22089	0/ -1/ 0	0/ -2/ 0	-1/ 0/ 0	-1/ 0/ 0	4/ 0/ 2	-3/ -1/ -2
St. Louis, Missouri St. Louis County 29189	1/ 0/ 1	-4/ 1/ -1	0/ 0/ 0	0/ 0/ 0	0/ 0/ 0	1/ 0/ 1

E-4. Attributable Risk Report

Male/Female/Average

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
American Cyanamid Plant					
Bound Brook, New Jersey Somerset County 34035	0/ 0/ 0	0/ 0/ 0	-1/ 0/ 0	0/ 0/ 0	-20/-10/-14
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	0/ 0/ 0	0/ 0/ 0	-1/ 1/ 0	0/ 0/ 0	10/ 12/ 11
Allied Chemical Plant					
Buffalo, New York Erie County 36029	0/ 0/ 0	1/ 0/ 1	0/ 0/ 0	0/ 1/ 0	35/ 10/ 22
Monsanto Plant					
Taft, Louisiana St. Charles Parish 22089	-1/ 0/ 0	1/ 2/ 1	1/ -1/ 0	4/ 6/ 5	-15/ 0/ -7
St. Louis, Missouri St. Louis County 29189	0/ 0/ 0	0/ 0/ 0	0/ 1/ 0	0/ 0/ 0	-15/ -4/ -9

E-5. Benzidine and B-Naphthaline Sites

A Relative Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	121/128/123	148/124/142	145/108/138	115/ 96/105	128/115/123	123/109/115
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	89/ 95/ 90	118/ 44/103	127/ 64/114	131/ 94/111	132/116/125	97/111/104

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	124/115/120	126/110/122	112/134/118	127/130/127	88/ 98/ 91	129/108/119
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	106/149/123	107/ 94/104	86/117/ 96	88/123/ 96	128/179/142	120/ 96/110

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Allied Chemical Plant					
Buffalo, New York Erie County 36029	83/ 79/ 81	164/115/140	94/ 76/ 86	105/110/106	120/107/114
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	117/114/115	123/110/117	59/126/ 86	89/109/ 97	105/108/106

E-5. Normalized Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 92/ 92	92/ 78/ 85	92/ 64/ 78	78/ 7/ 41	92/ 92/ 92	78/ 64/ 71
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	6/ 31/ 19	68/ 6/ 36	81/ 31/ 55	93/ 31/ 61	93/ 56/ 74	43/ 68/ 56

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	92/ 92/ 92	92/ 64/ 78	92/ 92/ 92	92/ 78/ 85	49/ 64/ 57	92/ 64/ 78
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	81/ 93/ 87	93/ 31/ 61	6/ 68/ 38	6/ 81/ 44	68/ 61/ 75	93/ 68/ 80

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Allied Chemical Plant					
Buffalo, New York Erie County 36029	35/ 49/ 43	92/ 78/ 85	35/ 7/ 21	64/ 78/ 71	92/ 92/ 92
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	93/ 68/ 80	68/ 81/ 75	6/ 93/ 51	18/ 68/ 44	93/ 68/ 80

E-5. Attributable Risk Report

Male/Female/Average

Disease/Site	Stomach cancer	Mouth cancer	Esophagus cancer	Large Intestine cancer	Rectum cancer	Liver cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	3/ 2/ 3	2/ 0/ 1	2/ 0/ 1	3/ 0/ 1	3/ 1/ 2	1/ 1/ 1
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	-1/ 0/ 0	1/ 0/ 0	1/ 0/ 0	6/ 0/ 2	3/ 1/ 2	0/ 1/ 0

Disease/Site	Pancreas cancer	Trachea Bronchus, and Primary Lung cancer	Kidney cancer	Bladder cancer	Skin cancer	Brain cancer
Allied Chemical Plant						
Buffalo, New York Erie County 36029	2/ 1/ 1	10/ 1/ 5	1/ 1/ 1	2/ 1/ 1	0/ 0/ 0	1/ 0/ 1
J.T. Baker Chemical Plant						
Phillipsburg, New Jersey Warren County 34041	1/ 3/ 2	3/ 0/ 1	0/ 0/ 0	0/ 1/ 0	0/ 0/ 0	1/ 0/ 0

Disease/Site	Bone cancer	Hodgkin's Lymphoma	Lymphosarcoma and Other Lymphoma	Leukemia	All cancer
Allied Chemical Plant					
Buffalo, New York Erie County 36029	0/ 0/ 0	1/ 0/ 1	0/ 0/ 0	0/ 1/ 0	35/ 10/ 22
J.T. Baker Chemical Plant					
Phillipsburg, New Jersey Warren County 34041	0/ 0/ 0	0/ 0/ 0	-1/ 1/ 0	0/ 0/ 0	10/ 12/ 11